

The Journal of the Michigan State Medical Society

PUBLISHED UNDER THE DIRECTION OF THE COUNCIL

Vol. VII

DETROIT, MICHIGAN, JUNE, 1908

No. 6

Original Articles

OPSONIC THEORY AND TECHNIC.*

JOSEPH SILL, M. D.,
Detroit.

In discussing one of the factors in the production of immunity, we are likely to consider it alone, without taking into account other factors which are perhaps of equal importance. This is especially true when our attention is directed to the theoretical side of the subject. We are apt to think that the latest theory of immunity, supported, it may be, by a large amount of experimental and more or less clinical evidence in its favor, supplants and renders obsolete earlier theories. This, of course, may be true, but more often it is not true. It more frequently happens that while the acceptance of the new theory forces some modification of the earlier views, it supplements the older ideas and makes clear some points which were before obscure. This is particularly true of Wright's opsonic theory. Not only has it not supplanted the older theories, but it has actually rehabilitated one of them and brought into prominence one of the forces in the production of immunity that had fallen into more or less obscurity. I trust you will pardon me, if for the sake of a better perspective, that

we may see more clearly the relation that the opsonins bear to the other factors in the production of immunity, I recall to your minds, very briefly, some of the earlier conceptions.

It may not be amiss to begin by stating, on what factors, to my mind, our comparative freedom from infectious disease depends. Broadly speaking, they are two.

First: Those influences limiting the power of bacteria to enter the body, and there multiply and produce substances poisonous to the body.

Second: The forces exerted by the body tending to destroy these bacteria which have entered the body and are there multiplying and producing poisons, and those forces exerted by the body tending to render harmless poisons produced by such bacteria.

In a broad sense the condition we know as immunity depends both on limitations of the bacteria, and resistance on the part of the body; in a more restricted sense, when we speak of immunity we refer to a condition of resistance, either natural or artificial, to bacteria and their poisons. We will see that the earlier efforts to explain im-

*Read before the Wayne County Medical Society, March 2, 1908.

munity took into account only the first factor; that theories based on the limitations of bacteria for growth and multiplication in the body afforded insufficient explanation, and that the later theories have been more concerned with the second factor—that is, the resistance of the body to infection.

Pasteur made the earliest effort to explain immunity. He suggested that immunity might be due to the exhaustion of certain elements necessary for food, by bacteria growing in the body, and that these substances were reproduced but slowly. This was known as the exhaustion theory, and seemed to explain very well the known facts that bacterial diseases are self-limited and that an artificial immunity to some bacterial diseases can be produced by the inoculation of living but attenuated bacteria, for after a certain micro-organism has grown in the body and used up all the elements necessary for its growth, it will no longer be able to grow, and will die, and until these necessary elements have been reproduced, the animal will be immune to infection with this particular germ. A single fact served to overthrow this theory. It was observed that Algerian sheep were immune to doses of anthrax bacilli sufficient to kill French sheep, but that they would succumb to much larger doses. Now, if the food supply for a few bacteria were absent, how could a much larger number find suitable pabulum?

To meet these objections Chauveau brought forward the theory that bacteria developing in the body elaborated substances harmful to themselves and these substances were retained in the body for some time. This was known as the "Retention Theory," and in accordance with it bacteria could not grow in the body so long as these harmful substances were retained. While the theory as here stated cannot now be offered as an explanation of immunity, it comes

much nearer to our present conceptions than does the exhaustion theory, for bacteria multiplying in the body certainly play a part in the production of substances by means of which they are destroyed and their poisons are neutralized.

The striking thing about both these theories is that neither takes into account any activity of the body in resisting infection. The body plays an entirely passive part in the process. It is merely a great natural culture tube in which bacteria grow and multiply until they are starved out by exhaustion of the food supply, or are destroyed by their own excrementitious matter.

Metchnikoff was the first to see that the body played an active, not a passive part in the production of immunity. He observed that certain unicellular animals had the power, by means of their amoeboid motion, to engulf and digest food particles, and that certain of the body cells, notably the polymorphonuclear leucocytes, possessed the power of amoeboid motion. It was also noted that in many of the infectious diseases the polymorphonuclear leucocytes circulating in the blood were largely increased in number. Metchnikoff suggested that this increase was the result of a stimulation of the body by the invading bacteria or to the production of substances which attracted the leucocytes to the point of infection and that the function of these cells was to engulf the bacteria and thus destroy them. He named the leucocytes phagocytes, and called the phenomenon phagocytosis. That phagocytosis occurs was easily demonstrated,—the process is very evident in gonorrheal pus,—and Metchnikoff drew a graphic picture of a great battle waged between two armies—the invading bacteria, and the defending phagocytes. This theory has had an immense influence on our conceptions of immunity, and held undisputed sway until it was in a measure displaced by Ehrlich's theories. For a time Ehrlich's

theory almost obscured Metchnikoff's cellular theory, but recent investigations, more especially Wright's work on the opsonins, have shown that it is by no means to be disregarded, and today Metchnikoff's theory, modified, it is true, in the light of more recent investigations, is regarded by most bacteriologists as explaining an important part of the mechanism whereby the body protects itself against invasion by pathogenic bacteria.

The next great advance in our knowledge of immunity came as a result of the announcement of Ehrlich's so-called side-chain theory. In all its details and ramifications this theory is so exceedingly complex, that it is entirely outside the scope of this paper to discuss it minutely, much more than the whole time at my disposal would be necessary for an adequate presentation. Its broad outlines may, however, be briefly drawn.

In distinction to Metchnikoff's cellular hypothesis, Ehrlich put immunity on a chemical basis. Living protoplasm is an unstable compound of constantly changing composition. It possesses an enormous capability of entering into new combinations, of adding to, and splitting off from itself elements and compounds. For example, it unites chemically with oxygen and other food materials circulating in the blood and splits off carbon-dioxide and water. Just as the protoplasm of the body cell enters into chemical union with food substances, so it may unite with bacterial cells or their poisons. Ehrlich believed that the only way bacteria or their poisons can exert a harmful influence on the body is by such chemical union with its cells. There is, however, a marked difference between the union of the body protoplasm with food substances and its union with bacteria and their products. The union with food substances is loose, easily broken down; the union with bacteria and their products is firm, not eas-

ily broken down. The atom groups concerned in this union are therefore lost as far as the normal functioning of the cell is concerned. The inability of the cell to make use of these atom groups results in an impairment of its functioning power and a stimulus to the production of other identical atom groups to replace those lost. These atom groups are produced in excess of the needs of the cell and the excess is cast off into the blood stream, ready as anti-toxic and anti-bacterial bodies to neutralize the combining power of the bacteria and their products and by the exertion of a dissolving power, to destroy them. Immunity, then, results when the body has, circulating in its blood stream, a sufficient quantity of anti-bacterial substances of various kinds to protect it from the action of the invading bacteria.

Immediately on the announcement of this new theory, the bacteriologists of the world were divided into two groups, the adherents of Metchnikoff, who supported his cellular theory, and the followers of Ehrlich, who advocated his so-called humoral theory. For some years Ehrlich and his followers had the better of the argument until Wright and Douglas showed that neither Metchnikoff nor Ehrlich told the whole story and that our conception of immunity must be broad enough to include both cellular and humoral activity. Wright and Douglas found the connecting link between the biologic phenomenon of phagocytosis and the chemic action of the anti-bodies.

They found among the substances circulating in the blood, certain bodies which favored phagocytosis. They found that in the absence of these bodies phagocytosis would not take place, or would occur only to a slight degree, but that as a result of the growth and multiplication of pathogenic bacteria in the body, these substances were largely increased in the blood stream. It was

also found that these bodies were present in the serum, that they acted on the bacteria and not on the phagocytes, and were different for different bacteria. They called these bodies opsonins, from the Greek verb *opsono*, which means "I prepare food for."

The method of determining whether the action of the opsonins is on the phagocytes or on the bacteria is of sufficient interest to mention. If leucocytes are subjected to the action of serum known to contain, for example, staphylococcus opsonin, are then washed and mixed with a suspension of staphylococci, phagocytosis does not take place. If, however, an emulsion of staphylococci are subjected to the action of serum known to contain staphylococcus opsonin, are then washed, and mixed with washed leucocytes, active phagocytosis at once occurs.

It will be readily seen how this broadens and unifies our conception of immunity, for not only does Wright's work give new support to Metchnikoff's cellular theory, by demonstrating that phagocytosis is an important factor in the production of immunity, but it supports Ehrlich's humoral theory by showing that phagocytosis does not occur without the help of substances circulating in the blood stream, as a result of the growth and multiplication of bacteria in the body. It unites two different and more or less antagonistic conceptions of immunity into a homogeneous whole.

If Wright had stopped here, his work would have been of great value, but he went further and on the basis of his theory, developed a practical method of treating certain infections, many of which were extremely resistant to other modes of treatment. He thus added to an important contribution to the science of medicine, an equally valuable contribution to the art of medicine.

He found that small doses of killed

cultures of the micro-organism that was causing an infection would markedly stimulate phagocytosis of the germ in the body—that this increase is preceded by an initial decrease in phagocytic power, that the effect of repeated doses of these killed bacteria is not cumulative, that a vaccine made from a culture isolated from the patient—the so-called autogenous germ—is more efficient than a vaccine made from a stock culture of the same organism, and finally that the results of this treatment were often all that could be desired clinically. Before bacterial vaccination could be successfully applied to the treatment of infections, it was necessary to devise some method of estimating the amount of opsonin in the patient's blood. This was necessary because, since the first effect of a bacterial vaccine is to cause a decrease in phagocytic activity, or a "negative phase," it is important not to give the second dose during the negative phase caused by the first; because since the effect of repeated doses is not cumulative, the second dose should not be given until the effect of the first is largely passed, and because if the patient's phagocytic power is high before treatment it is probable that vaccination will not further increase it, and will therefore be of no value.

Inasmuch as the opsonins are bodies of unknown composition we have no direct method of estimating the opsonic content of the blood. We can, however, determine the ratio of the amount of opsonin in one serum to the amount of opsonin in another serum. If, therefore, we obtain the ratio of the amount of opsonin in the patient's serum to the amount of opsonin in a normal serum, we will find out just how much this amount differs from the normal. In other words, we can say that the patient's serum contains twice as much, two-thirds as much, or half as much opsonin as the normal serum. This is

sufficient for practical purposes, for while we have no knowledge of the actual amount of opsonin present, we do know whether it is increased or diminished, and how great this increase or diminution is.

The method of determining this ratio depends on two facts:

First: The opsonins are found in the blood serum.

Second: The opsonins act on the bacteria, not on the leucocytes.

Leucocytes, if washed free from serum, may then be obtained from any source. If now equal volumes of washed leucocytes, serum, and an emulsion of bacteria isolated from the patient be mixed and incubated for a short time; if smears made from this mixture are stained, and the bacteria found in a large number of leucocytes counted, by dividing the number of bacteria by the number of leucocytes counted the average number of bacteria which leucocytes will ingest, when treated for a known length of time with the serum used may be determined. If another test be made, under identical conditions, except that another serum is used, the average number of bacteria which the same leucocytes will ingest when treated with this other serum, may be determined, and the ratio of the opsonic content of one serum to the opsonic content of the other is easily found. This ratio is called the opsonic index.

For example, we have two sera, A and B. We mix equal volumes of leucocytes, bacteria and serum A—and leucocytes, bacteria, and serum B; we incubate both mixtures at the same temperature for the same length of time, and find the average number of bacteria ingested by the leucocytes in the first mixture is 4; and that the average of bacteria ingested in the second mixture is 3. If serum A is the normal serum, and serum B is the patient's serum, then the patient's opsonic index is $\frac{3}{4}$. That is to

say, the patient's serum contains only $\frac{3}{4}$ of the normal amount of opsonin. Another method of determining the opsonic index has been suggested. This is to find the dilution of serum which just increases phagocytosis. From a comparison of the dilution at which two sera just increase phagocytosis, the ratio of one dilution to the other is found and this ratio represents the opsonic index.

The making of the vaccine is a simple process. It consists of making an emulsion of the bacteria in physiological salt solution, then mixing a volume of the emulsion with an equal volume of normal blood. Smears are made from this mixture and the ratio of the number of bacteria to the number of red blood cells is determined. From this ratio, assuming that normal blood contains 5,000,000,000 red blood cells in the cubic centimeter, it is easy to find the number of bacteria in a cubic centimeter of the emulsion. The emulsion is then sterilized and diluted to the desired strength.

While this method of treatment has been found very valuable in selected cases, and in the hands of certain men, there are certain difficulties in the way of its general adoption, even in suitable cases.

1. The estimation of an opsonic index is a time-consuming procedure. While, of course, a number of estimations, especially if they are all with the same germ can be made with much greater economy of time than a single one, still ten or twelve estimations in a day are probably the limit of one person's ability if he gives his whole time to this work, and I doubt if this could be kept up day after day without ruin of the eyes.

2. The technique is exceedingly delicate. One must not only be a trained laboratory worker, but must have considerable experience with this kind of work for his results to be constant and reliable. This practically limits opsonic therapy to those who have had adequate

laboratory training, and who are able to devote all or a large part of their time to this work.

3. On account of the time-consuming character of the work and the special training required, opsonic work is of necessity expensive.

4. With our present technique, the margin of error is large. This must be so when we consider the relatively small number of bacteria and leucocytes on which we base our averages, and the relatively small differences we estimate by means of those averages.

Most important of all, we are without a suitable normal standard for comparison. It can be readily shown that the opsonic content of any blood is not constant, but varies from day to day. If our so-called normal serum varies in opsonic content, how can we obtain any accurate idea of the variations in opsonic content of the patient's serum, when our only standard for comparison is not fixed, but constantly shifting? An effort has been made to overcome this difficulty by mixing several normal sera and using the mixture as a "normal." This

lessens, but does not eliminate error from this source, and makes the method of estimating opsonic indices more difficult and cumbersome.

These difficulties do not condemn, they only limit the application of opsonic therapy. The experience of those who have done much of this work goes to show that bacterial vaccination regulated by careful observations of the opsonic index is amply justified by clinical results.

If opsonic therapy stands the test of time and trial, and justifies the expectations of its enthusiastic advocates, it is only a question of time when its applicability will be greatly broadened in two ways:

First: A simpler and more accurate method of estimating the opsonic index will be developed, and

Second: With an increasing knowledge of the effects of bacterial vaccination, it will become possible to regulate the treatment more and more by clinical observation of the patient, and estimations of the opsonic index will become less and less essential.

Uncontrollable Vomiting of Pregnancy.—

The prevailing view of the etiology of this condition, that it is a form of intoxication, has received valuable confirmation by a recent case reported by WINTER. Besides the vomiting, the symptoms with which Winter's patient suffered were irregular pulse, marked mental disturbances, for the most part of a maniacal nature, albuminuria, slight jaundice and fever. The mental symptoms had cleared up somewhat under diuretic treatment. The pathologist, knowing nothing about the clinical diagnosis, reported lesions suggestive of an intoxication, calling attention to fatty degeneration in the liver acini, and degeneration of the kidney epithelium, with ecchymoses.

WINTER believes that the vomiting is at first merely a reflex neurosis. If it persists, this neurosis injures the functioning of the liver and kidney, causing a retention of water products and fatal intoxication. During the first stage, every measure to quiet the nerves should be employed, such as rest in bed, and suggestion, if necessary.

Food should be supplied liberally, even if vomited, and large quantities of water given, in order to keep the kidneys and liver actively working. The water should be given per rectum (in order to reach the liver), three or four quarts being given a day. In case symptoms of intoxication develop, the pregnancy should at once be interrupted. If some reliable test for the work done by the liver could be devised, it would be a great aid, as then the pregnancy could be terminated before serious lesions occur in the liver. WINTER calls attention to Williams' test of the amount of ammonia in the urine, which rose from 4 to 38 per cent in his cases. The Strauss levulose test might be employed. Loss of weight is no criterion, as this results largely from the loss of fluids.

The toxemia and the neurosis, then, are but two stages of the same process. Every effort should be employed in preventing the passage from the first to the second stages. *Zent. f. Gyn.*, Nov. 30, 1907.

THE PSYCHIC TREATMENT OF NERVOUS DISORDERS.*

C. A. STIMSON, M. D.,

Eaton Rapids.

In speaking of the treatment of nervous diseases, the question arises, What are the diseases that come under this category?

In times past the entire class of neuroses was based on a negative conception, at a time when pathological anatomy, having undertaken to explain disease by changes in the organs themselves, found itself brought face to face with a certain number of morbid states for which no reason could be found. The number of neuroses ought, therefore, to diminish with the progress of pathological anatomy; for just as soon as a lesion is discovered, that satisfactorily explains the symptoms observed during the lifetime of the patient, the disease should be stricken from the list of neuroses, and in such cases an anatomico-pathological name should take the place of the clinical one. So that, when pathological anatomy discovers a lesion, a focus of inflammation, a hemorrhage, a thrombosis, and when chemical analysis discloses a condition of intoxication, we no longer speak of neurosis, even though the symptoms might have been essentially nervous. In syphilis, tuberculosis, arterio-sclerosis, alcoholic intoxication, uremia, etc., we recognize a first cause. This first cause does not exist in affections which we call neuroses; even when we succeed in revealing the cellular changes which have produced the nervous or mental trouble. It is at this point that we are brought face to face with a fundamental factor: the influence of the mind and of mental representa-

tions. The affections of the psychic life are not determined by primary change of cerebral tissue as in general paralysis. The source of the trouble is psychic, and it is the ideation which causes or harbors nervous disorders. It is at this point that we, as physicians, have failed. We have been looking for first causes, and not having found them, have turned our cases over to others, and so in a large measure are responsible for empirical psycho-therapy in its many allied forms, mental healing, Christian science, and the like.

Having eliminated the neuroses, which are probably somatic in origin, we have left in a group the affections in which the psychic influence predominates, those which are more or less amenable to psycho-therapy. They are:

Neurasthenia, hysteria, hysterical-neurasthenia, the lighter forms of hypochondria, melancholia and certain conditions of very serious disequalibration, bordering on insanity.

For all practical purposes, we can suppress the clinical names of the above group and use the common term—nervousness. It is to this nervousness that the treatment by psycho-therapy is particularly applicable. It is in this domain we witness a slow but continual transformation of our medical ideas, full of import to practical medicine.

The conception that we as physicians should have in mind, if we wish to undertake the treatment of nervous disease with success, is this:

Nervousness is a disease pre-eminent-ly psychic, and a psychic disease needs

*Read before the Montcalm County Medical Society at Lakeview, April 9, 1908.

psychic treatment.

These psychio-neuroses are frequent, they are often very serious, and much more than organic troubles; they can destroy the happiness of individuals and of families.

The physician who interests himself in the life of his patients, who paints, as it were, the secrets of their souls, is moved by the suffering which he sees. He sincerely pities these unfortunate beings and sympathizes with them.

Bodily illness, however painful it may be, seems to him less cruel than these psycho-neuroses, which attack the individual, the very ego. Patients themselves are aware of this change in their mental condition, and often envy all sorts of people who are suffering even with painful diseases, but whose mental condition is not affected. To add to the misfortune, nervous patients are often misunderstood. They often keep up an appearance of good health for a long time. They show very great variations in their disposition; today suffering martyrdom, and tomorrow able to take up their work with a certain briskness. Their relatives and even the most loving and best meaning, do not know what to think of these fitful changes. They get into the habit of reproving the patients for their laziness and caprices, and their lack of energy. Their encouragements are taken in the wrong spirit and only serve to increase the irritability, sullenness and the sadness of the poor nervous people. The overwhelming influence of emotions of all kinds on the development of the psycho-neurosis is perfectly obvious. But alas! the great majority of us go about as if we never noticed it. We are so impressed with our role of physician to the body, that we are always hunting among the organs of the abdomen, pelvis, or thorax for all the psychic and nervous troubles.

To study patients is not to cure them; to be sure, we are on the right track,

armed with the microtome and the microscope, right when we study the chemistry of the organism and apply the exact clinical methods of modern medicine to the study of mental diseases. We cannot, I say, go too far along these lines, but on the condition that we do not forget psychology, and the unmistakable influence of the mental over the physical, for, properly speaking, psychology is only a chapter of physiology, of biology, and we are guilty of a pleonasm when we speak today of physiological psychology. The study of psychology is physiology in its essence.

Narcotics play too important a role, and often the right word or a rational suggestion will replace to advantage the use of morphine, chloral or sulphonal. A heart to heart talk with these patients is worth considerable more to them than douches, baths or chloral.

Please do not misunderstand me at this point: we must not abandon scientific ground, we must continue to study man with all the precision of modern biology, but we must not forget that the brain is the organ of thought, and that there is a world of ideas.

To be sad is a mental state, it is, therefore, a psychic manifestation, but we recognize in it a physical substratum since every act of consciousness must have a corresponding cerebral state. In its essence the phenomenon is psychophysical, as is everything that takes place in our mentality. But the expression of it is psychic—it is translated by discouraged words and by abnormal volitions. On the other hand, this disposition of mind can be provoked by mental representations and ideas. It is, therefore, of ideo-genic origin. It can, on the other hand, be due to a poison affecting the nerve-centers; we then recognize a somatic cause for it. When we say of an individual that he raves, we characterize at the same time his mental state and the cerebral trouble

that is indicated. We perceive at the same time the two sides of the phenomenon. Sometimes this raving is the result of unbounded joy. It is then psychological in its origin. At other times it is due to alcoholic intoxication, or to the absorption of opium; it is then somatic from the point of view of its cause.

To the eyes of most people, pain is physical. The thought springs immediately to the cause, which is in fact, generally material, and sick people make a great effort to have not only the unquestioned reality of their sensation recognized, but also the absolute materiality of the phenomenon. This popular view is too summary.

To suffer presupposes two things: on the one hand a material condition of certain groups of nerve cells—a physical phenomenon; on the other hand a sensation perceived, a process that is psychic in its essence.

The existence of pain does not by any means inform us concerning its cause. To seek this cause is our ulterior problem, whose solution does not always belong to the patient. The same pain, as real as a conscious act, real also as a concomitant cerebral state, may have as its cause a lesion of the tissues or an irritation attacking the neuron in its continuity.

It may, perhaps, be due only to mental representations, to fixed ideas or to auto-suggestion, born in a psychological way. The pain in itself is none the less real on this account.

We are in the phenomenon of a physiological nature, in the strict sense of the word, when the electric irritation of the inferior cardiac branch of the sympathetic, causes acceleration of the heart beat.

We drop right into genuine psychology when an emotion causes the palpitations.

Tears can flow by mechanic or chemi-

cal irritation of the conjunctiva; they also accompany our sorrows and our joys. The appetite is normally created by the need which the organism feels of renewing its stock of energy, but it can be stimulated by the sight of an appetizing dish, or by a gustatory memory; it can be suppressed, on the contrary, by a moral emotion, or by disgust. It makes very little difference whether the disgust be provoked by the sense of smell or by a purely mental representation due to a verbal suggestion.

Vomiting may even occur as a result of such a reaction, which is ideogenic in its origin. It is important, therefore, to recognize that the same physiological manifestations and the same pathological troubles may have physical or moral causes. It is self-evident that they may be associated.

These ideas ought to be kept in mind in studying the reciprocal influence which the physical and the moral are constantly exerting one upon the other.

To make the subject matter practical allow me to cite a case:

The wife of a minister suffered much pain in abdomen and pelvis, with nausea and occasional vomiting. Her physician advised an operation upon her appendages and she was taken to the hospital. Upon her return, her nausea and vomiting persisted. It was at this time that I was consulted, and upon careful physical examination, I could find no cause for her serious vomiting which had become persistent. Upon a closer study of her condition I found that while she had a high sense of morality, her mentality was unstable; she did not inhibit well. She was greatly concerned as to her responsibility as that of a pastor's wife, and suffered greatly at the moral depravity that existed on every hand. I explained to her how moral disgust could produce nausea and vomiting, and that if she could inhibit the impressions that came to her, she would be cured. She accepted the suggestion kindly, and after several conversations her vomiting ceased.

The object to keep in mind in the treatment of neuroses, is to make the

patient master of himself. The means to this end is the education of the will, or, more exactly, of the reason.

Time will not permit us to go further into the philosophy of this most interesting subject. I will, therefore, conclude by illustrating a few cases:

Some time ago I was called to treat a patient suffering at her menstrual time. She was in a rigid condition, her friends about her were resorting to all measures for her relief but to no avail. I immediately called for some hot water. Thereupon I proceeded to fill my hypodermic with water, quickly inserted it into the arm and requested that all should leave the room and that the patient would soon drop to sleep. I then said to the patient: "You will, no doubt, feel a certain dizziness from the result of the injection, but do not mind that, you will soon be free from pain." I soon asked her if she could feel the effect of the hypodermic, to which she replied that she began to feel dizzy. The feeling soon passed away, however, for she soon dropped asleep.

Upon making my visit to her the following day, she expressed her pleasure upon the quick effects of the injection, and requested to know what it was that relieved her so quickly, whereupon I proceeded to tell her the true situation. I said: "The medicine I gave you last night was water. You were in no condition at that time to be reasoned with, because you were in pain—neither did I think you were in a position to understand. Your pain at first was uterine, and had you inhibited the uterine impressions that came to your brain, it would have ended there. You, however, refused to inhibit, until it reached to your finger tips and all parts of your body, causing you to have spasms. The pain from which I saw you suffering was not uterine, so much as it was that from general cramp, in which you held yourself for an hour. You had allowed the uterine pain to shunt downward, along all your nerve trunks."

She was satisfied with the explanation and seemed to thoroughly understand, and since that time has been able to manage herself without any further trouble.

In the exercise of the art of healing, the moral influence plays a very important role.

In the management of these cases it becomes necessary for the physician to vary his methods according to the indications of the moment. He may have recourse to the most varied physical measures, or he may limit himself to the influence of psycho-therapy. It is often necessary to associate them. I have in mind a case upon which pure psycho-therapy had its effect:

The case briefly stated is that of a young married woman who had been bed-ridden for a year. Her physician had run the gamut of liver disease, heart and stomach disease and uterine trouble. When I saw her she was in a starving condition, having refused food for nearly a month. After making a careful physical examination, I proceeded to tell her that her physician had cured her of all her ills, and that she was absolutely well, but that within a month she would be in her coffin unless she willed to get out of the bed and begin eating. She refused by saying she knew her heart would stop if she left her bed. I then informed her that a physician could do her no good, took my hat and case and left the house. After I had gone some distance, her mother called me back and said that she believed if I would manage her properly, that I could help her. I walked rapidly into the room, stood by her bed and said, "Your life depends upon getting out of that bed and sitting in that chair. Your heart will not stop beating." She managed herself from the bed to the chair and I conversed with her some time and called upon her the following day and had her removed to another house, and in ten days sent her fifty miles away to a resort where she regained her strength.

Another case in which it seemed necessary to combine measures other than simple psycho-therapy was that of an old man who had been in bed for a long time, suffering from inanition. All remedial measures had failed. He became despondent and all efforts at happy suggestion were of no avail. My visit to him was on a cold winter's day; as I was driving from my barn I chanced to see my linen duster and straw hat. I put it under the seat of my cutter and took it along. Before entering the house, I removed my fur coat and donned the hat and duster. Upon entering the house, I proceeded to take a chair and began fanning myself with my hat in all seriousness. The old man took in the situation

at a glance and began laughing heartily. I had succeeded in reaching a point in our philosophy which was common to both through the ridiculous. The patient's recovery was assured.

I know that in order to practise this beneficent psycho-therapy it is not necessary to have cut and dried opinions on philosophical subjects. A little tact and kindness are enough. Sometimes in the case of mistaken diagnosis, where the patient has lost faith in the physician and his remedies, it becomes necessary to find a point of faith common to the patient and the family before a cure can be effected.

A young married woman had been in bed for two years and a half suffering from what had been diagnosed as cancer of the stomach. She had acquired the habit of vomiting each day. The vomitus was of a suspicious nature, but upon examination I found no sarcinæ or Opler-Boas bacilli and diagnosed the case as one of nervous dyspepsia. I treated her for thirty days, but with no results; the vomiting continued and she re-

fused to leave her bed. The family were simple hearted people with strong Christian faith. The thought struck me to try treatment along the point of their faith.

At my next visit, I walked rapidly to the bed without removing my outer coat and said to the patient: "Laura, I have had a vision that you are going to be well and out of bed in ten days. I want you to ask God to bless all the means that I shall use." And she said she would. I said to her husband: "Irving, will you meet the conditions?" And he said he would. I said to her mother: "Will you do likewise?" And she replied in the affirmative. In ten days she arose from the bed healed. No doubt if I had been as sure on the point of faith as my friends were, she could have been healed instantly.

Finally, when we are disarmed from a physical point of view, let us remember that in our role as physicians, we have a powerful support, which our sympathy for the patient gives us, our constant altruism, and I do not hesitate to say these are the more efficacious.

Smallpox in Michigan.

During the four months, from November 1, 1907, to March 1, 1908, nine hundred and fifty cases of smallpox have been reported to the State Department of Health. More or less epidemic in character everywhere throughout the state, the spread of the disease has reached striking proportions in sixteen localities, that is, three cities, one village and twelve townships. Indeed, in many instances drastic measures were necessarily tardily taken to prevent the threatened quarantine of the entire jurisdiction. The chief cause of these epidemics is that the people are not protected by vaccination and re-vaccination. In addition, common mistaken diagnosis on the part of the medical profession, wilful opposition on the part of many

persons to observe the necessary preventive measures and lax enforcement of the law by health authorities, have combined for the wide prevalence of the mild form of smallpox. An occasional death occurs from this light form of the disease. It is everywhere a nuisance, to say the best of it. It is costly. It is preventable. The means to prevent it are absolutely known; they are known to the general public. The prevalence of smallpox in Michigan today speaks for the mistaken judgment on the part of many medical practitioners; it speaks for the indifferent and shortsighted, false economy of the local health authorities; it speaks for the carelessness of the general public.—*Public Health*.

THE CURATIVE VERSUS THE PALLIATIVE TREATMENT OF HERNIA*

FRANK B. WALKER, M. D.

Detroit.

Because of their bearing on the subject in hand, I wish first to narrate briefly the following four cases, that came in my practice during July, August and September, 1907. They are not presented as showing permanent results since they are of too recent occurrence to be considered absolute. They are illustrative cases or object lessons merely.

The first represents typical conditions in boys whose herniae have not been cured in early childhood. When operated upon, as that boy was, before strangulation occurs or dense adhesions form, operation is easy and recovery usually prompt. The second case resembled the first with the exception of strangulation. He was fortunate in having come to operation within the first twenty-four hours. The third and fourth cases belong to that large group, for which the profession is largely responsible, who bear their deformity until driven to operation to escape pain and death. They are fortunate then to get away even without a radical cure. Their history charts read as follows:

Case I. C. E. A., a boy of 14, is the third member of the family to have trouble of this nature. His father had a left-sided rupture from childhood. An only brother also had a hernia on the left side, which was operated upon to secure relief. Our patient had a left inguinal hernia from birth. It was the source of constant annoyance and discomfort. It made the patient irritable and at times caused severe pain. During the preceding seven or eight months the control of the

hernia by a truss had been unusually difficult. The boy was more nervous than ever and so constipated as to require a cathartic daily. Profiting by the relief obtained by the other son the mother decided to have this one operated upon also. The Bassini operation was done July 10, 1907. Recovery was uneventful. The boy was taken home on the thirteenth day.

Case 2. A. O., a youth of 17, a machinist, was brought to St. Mary's Hospital August 17, 1907. He had a congenital right inguinal hernia, but had never worn a truss. About noon, the day before, the patient was seized with severe griping pains, which caused him to double up in agony. He vomited several times and the retching "seemed to almost tear him to pieces" in the region of the hernia. Reduction of the hernia was attempted that afternoon and again on the following morning, but without success. When brought to the operating table inspection showed a globular enlargement of the right side of the scrotum about the size of two doubled fists and a small sausage-shaped mass extending along the course of the right inguinal canal. A straight oblique incision was made along the course of the canal and extending to the base of the scrotum. On opening the sac the gut was found to be reddened and congested but was returned into the abdomen. The sac was ligated and resected as usual and the internal oblique and transversalis muscles were sutured to Poupart's ligament. The wound healed at once. The patient was out of bed on the seventh day and left the hospital two days later.

Case 3. Mrs. L. R., 39 years of age, came under my care complaining of pain all over the abdomen. Her temperature was 99.6 F.; pulse 80; respirations 20. In the right groin just above Poupart's ligament and directly over the region of the external ring there was a tense swelling about the size of a small hen's egg. It was somewhat movable but coughing produced no im-

*Read before the Lapeer County Medical Society, January 8, 1908.

pulse. Percussion showed flatness. Inquiry elicited the following history: Succeeding a confinement fourteen years before, a small tumefaction about the size of a pigeon's egg appeared in the right groin. It caused her no inconvenience as a rule, but at times, after having been on her feet a great deal, the tumor would increase slightly in size. Manipulation and the recumbent posture always caused the mass to disappear. Two days before entering the hospital, she was seized with severe cramping abdominal pains. At this time she noticed that the tumor was larger than usual, tender and irreducible. Her bowels, which had moved regularly every day, became now obstinately constipated. In the hospital a simple enema was given and followed by vomiting of a quantity of dark brown fluid. Strangulated hernia was diagnosed and operation advised. A radical cure was attempted July 22, 1907. The usual incision was made and carried down to the sac, upon opening which a quantity of dark bloody fluid ran out. A loop of small intestine about three inches in length emerged from and re-entered the ring. It was black and dead-looking and at one point there was an ulcerated hole in it the size of a ten cent piece. After carefully enlarging the ring and getting hold of healthy gut at each end, about six inches of the intestine were resected and an end to end anastomosis performed by means of the Connell suture. The abdominal muscles were sutured with catgut and the wound closed without drainage. Three days after the operation an obscure febrile rise occurred but the wound showed no signs of sepsis and the patient expressed herself as feeling good. The bowels moved well. The temperature continued from 100° F. to 103° F., during the succeeding four days, the patient became somewhat delirious, and the skin of the thigh below the incision began to look red and indurated. The lips of the wound were parted, when about a drachm of thin sero-purulent exudate oozed out. A small gauze drain was inserted but the fever persisted still. Two days later a faint urinary odor was detected on the dressings. Next day considerable urine was found to be escaping. A self-retaining catheter was passed through the urethra and left in situ, the head of the bed elevated in order, if possible, to direct the flow of urine away from the abdominal opening of the bladder, and rubber drainage provided both above and below through the operation wound. At first the urine per urethra was scanty and contained large quantities of albumin. The bowels moved normally. In

ten days the urinary fistula closed, after which the wound healed rapidly. August 17, the albuminuria had entirely disappeared. August 29, 1907, recovery had become complete and the patient was discharged cured.

Case 4. E. B., a carpenter, 40 years of age, entered St. Mary's Hospital with a pyriform tumor of the left side of the scrotum, eleven inches in length by five inches in its broadest diameter. The base of the tumor tapered toward the external abdominal ring, from which could be traced a swelling extending through the inguinal canal. On palpation the tumor was smooth and tense at the base, but more fluctuating at the apex below. There was no impulse on coughing nor translucency. The temperature was 101° F., and pulse 92. There was no pain at the time but there was a history of vomiting once or twice daily for about a week. The left side of the scrotum had been as large as an apple as long as he could remember. It had a fatty feel and increased in size whenever he coughed or strained. At times the tumor became large by an influx from above, but he had been able always to push this back into the abdomen. One week previous to entering the hospital, while loading a wagon, he was struck in the abdomen by the tailboard. He resumed his work but after getting home that night suffered considerable pain. The next morning he noticed that the scrotum was enormously enlarged. Taxis failed to reduce it. After several days' delay he was brought to the hospital. All food and drink were interdicted and vomiting ceased. Operation was done September 25, 1907. An oblique incision five inches long was made in the skin over the course of the inguinal canal and extended down on to the base of the tumor. The overlying tunics were carefully dissected out and entered. Upon incising the sac, a fecal odor was noted and a purulent exudate was uncovered. Extreme care in making the dissection was necessary because of the congested and friable condition of the tissues which entirely effaced the usual landmarks. A pyogenic membrane about one-sixteenth of an inch thick and of a dirty green color covered the lower and left lateral aspects of the mass and lost itself in the abdominal cavity. The greatest part of the tumor was found to consist of a liver-like substance, which proved to be made up entirely of omentum. A small loop of jejunum-ileum emerged from the external ring and entered again immediately. The scrotal section of the gut was gangrenous and almost entirely separated from the abdominal

portion, leaving a hole from which liquid feces continually escaped. The mass of omentum was ligated piecemeal, the spermatic cord being held aside meanwhile. When removed, the omental lump was about the size of a croquet-ball. The hole in the friable intestinal wall was as large as a silver dollar and was closed by means of the last third of the Connell anastomotic suture, followed by a superimposed layer of Lembert sutures. The apical swelling proved to be the testicle surrounded by a small hydrocele. The latter was emptied and its surface scarified. Because of the sepsis present, closure of the hernial opening was not attempted, and instead large rubber tubes were placed deep in the abdominal and scrotal portions of the wound. A strip of iodoform gauze was also packed around the abdominal drain and a few basting sutures inserted. Reaction was excellent. A fecal fistula developed on the fourth day and discharged feces for six days. The wound healed by granulation steadily and the patient was discharged cured November 7, 1907.

The management of hernia has undergone marked changes in the last twenty years. Previous to this short period cure was the exception instead of the rule. It has been estimated that radical cures were obtained in not more than forty-five per cent of the cases operated upon by the methods in vogue. Furthermore when the operation was not successful the patient was often worse off than before. Under such circumstances it was to have been expected that desperate cases only came to operation, the large remainder being treated by mechanical means or not at all.

How large the latter class is can hardly be appreciated. It has been conservatively estimated that fully three-quarters of a million trusses are made in this country yearly.* One maker alone claims to manufacture this number but his trade is partly export. When it is realized that to one truss wearer there are two or three others who should but do not constantly wear them, we obtain some idea of the size of this vast army

of deformed men, women, and children.

But figures alone do not tell the whole story. The wearer of a truss is a chronic invalid and as such his or her capacity for performing the full duties of life is affected. A man's producing capacity is thereby reduced from five per cent to fifty per cent, depending upon the variety and extent of the hernia from which he suffers. The loss to the State from this source is so great that from a financial viewpoint the state could well afford to provide the means and expense of every such patient's cure.

To the patient the cost is still more. Except in infancy and early childhood trusses seldom effect a cure. Their presence is a constant annoyance; the pressure irritating; many trusses are made wrong while others are fitted improperly; all are uncertain in effect and unreliable in their control of the hernia under all circumstances of life. All herniae tend to grow larger under strain and as age advances. Sooner or later strangulation is imminent and life is in grave danger.

In 1888, Bassini, of Padua, presented to the Italian Surgical Society a method of operation, which has revolutionized the treatment of hernia. In 1889, Halsted, of Baltimore, and in 1900, Ferguson, of Chicago, each published somewhat different procedures, based however on the essential principles of the earlier operation. These methods are all comparatively simple, easy to adopt in selected cases, and, if done aseptically, safe and curative in the hands of experienced surgeons.

From researches made by Russell, of Melbourne, there has been developed the so-called sacular theory of the origin of hernia. It is held by Russell and is being accepted by some good authorities already that the sacs of nearly all herniae are preformed even though the herniae do not appear until adult life. If

*De Garmo Abdominal Hernia.

a hernia occurs it is presumed that the sac had been formed congenitally and the exciting cause effected the presenting of the hernial contents. These observations seem reasonable and afford a scientific basis for the following facts: It is indubitably accepted as a principle of surgery that even though the intestine and omentum or other viscus be replaced into the abdominal cavity the hernia can not be cured without complete removal of the sac. From this it naturally follows that, except in young children, the use of trusses, injections, or other means short of removal of the sac is improper treatment. They are palliative merely.

If operative treatment be advised, proofs of good results should be forthcoming. The following among others have been submitted:

In September, 1907, Bull and Coley of New York, published a report of 2,032 operations for the cure of hernia, performed during the seven years previous. Of this number 1,978 were cases of inguinal and femoral hernia, in which there was a mortality of five patients, or one-fourth per cent. In 24 cases the operation was for strangulated hernia. Of these but one died—a very stout woman with a strangulated umbilical hernia. In 1,185 cases operated upon by the Bassini method, there were six relapses or 0.5 per cent.

In his recently published treatise on Abdominal Hernia, DeGarmo, of New York, has reported 43 operations for strangulated hernia with 9 deaths, and 1,257 operations for cure of hernia with 8 deaths, or 0.63%. There were 19 recurrences, in which 9 were re-operated upon, leaving a balance of 10 relapses.

In *Progressive Medicine* for June, 1907, there are quoted the results of about 2,000 operations upon 1,188 individuals by Brenner in Linz (Austria). Including the incarcerated cases there were 11 deaths in 1,188 persons operated upon,

or 0.9 per cent. In the non-strangulated cases there were 5 deaths, a mortality of 0.4 per cent. In 1073 radical operations there were 988 (92 per cent.) permanent cures.

In 300 operations for hernia reported by Pfister, of which 105 or 35 per cent were for large, irreducible hernia, there was no mortality.

The results obtained usually in incarcerated and gangrenous herniae in spite of aseptic and antiseptic precautions, are far from encouraging. They constitute the strongest argument for prompt measures in strangulated hernia and for radical cure.

Lessing has reported 156 operations for incarcerated hernia at Konig's (Berlin) clinic, with a mortality of 27, 17.3 per cent. The death rate of the non-gangrenous cases was 14, 11 per cent. The mortality in the gangrenous cases was 37.1 per cent. (13 out of 35).

Other statistics for gangrenous cases range from 42.5 per cent to 64 per cent.

Given such reports showing the high mortality of incarcerated and gangrenous hernia, and in contrast the low mortality and infrequent relapse of the non-strangulated cases, and realizing the inconvenience, discomfort and danger of truss wearing, we can conscientiously and honestly advise many patients to accept the radical cure of their hernia, assuring them that they are safer with the operation than without it. Under ideal conditions strangulated hernia would never occur except when hernia and strangulation occurred simultaneously or in those cases in which operation had been contraindicated. We recognize the gravity of a diseased appendix and advise the interval operation to forestall a more serious complication. Why, then, should we not refuse to bear longer the responsibility of a threatening uncured hernia?

The indications and contraindications respecting hernial operations may be

stated definitely as follows:

Infants and children up to the age of four or five years are usually curable by proper mechanical treatment. For them operation is seldom needed except the hernia become strangulated or be complicated with irreducible hydrocele or adherent omentum.

For children above five years, and adults having hernia, but otherwise in good health, radical cure is indicated.

Serious organic diseases of the heart, lungs or kidneys, advanced age and large, adherent, irreducible hernia in stout subjects, especially when the sac contains both intestine and omentum, are contraindications to any except emergency measures. In such cases the risk overweighs the probability of permanent cure.

It is unnecessary at this time to describe in detail the technique of operative treatment of the several varieties of hernia. The inguinal form constitutes about 73%, or nearly three-fourths of all hernia. It has been the pivot therefore on which has turned the cure of the other kinds. The same principles underlie the successful treatment of all. They are first, the thorough exposure of the canal, ring and its muscular pillars. Second, the ligation and excision of the sac flush with the parietal peritoneum so that any funicular pouch shall be obliterated. Third, the accurate approximation or overlapping of the muscular structures closing and covering the ring.

Persistent, remittent fever after an acute infection of the knee joint is usually due to a systemic invasion. Such cases are best treated by laying the joint wide open (Mayo operation).—*American Journal of Surgery*.

A large, slowly healing superficial ulcer of the leg may be due to a thrombosis of one of the small vessels leading to that part. Of course, syphilitic etiology must first be ruled out.—*American Journal of Surgery*.

In inguinal herniotomy the external oblique should be opened up from the external ring along the canal as high as the internal ring. The internal oblique and transversalis muscles should be sutured to the lower shelf of Poupart's ligament. In the Bassini operation the cord is transplanted to a new canal between the external and internal oblique muscles. Halsted urged removing all but one or two veins of the cord and placing the cord between the skin and external oblique muscle. Ferguson would leave the cord untouched but suture the lower two muscles to Poupart's ligament over the cord. The Bassini operation is most generally employed and has been found satisfactory. However transplantation of the cord is not considered essential to radical cure and many surgeons have come to regard non-interference with the cord as a mark of superiority.

In femoral herniae, which constitute about 18% of all forms, the hernial ring may be closed by a purse string suture after ligation and excision of the sac.

In the umbilical variety, composing about 8½% of all herniae, omentum, if contained in the sac, should be ligated and removed, the sac should be ligated and excised as usual, and the muscular structures overlapped so as to present a firm barrier.

The remaining 1% may be treated according to the same general principles.

In cases of suspected fracture of the skull, percussion-auscultation will be found a valuable procedure where all the other signs and symptoms have been negative. The procedure is the following: The forehead is repeatedly tapped sharply in the median line with the middle finger, the stethoscope being moved from one point to another from before backward. If a fracture be present, a cracked-pot sound is elicited just beyond it. The corresponding part of the head on the other side should be auscultated to eliminate possible error.—*American Journal of Surgery*.

HISTORICAL SKETCH OF THE DECEASED FOUNDERS OF THE DETROIT ACADEMY OF MEDICINE*

LEARTUS CONNOR, A. M., M. D.,
Detroit.

On September 21, 1869, our founders with their friends, organized the Detroit Academy of Medicine. Their names were: George P. Andrews, J. M. Bigelow, Caleb B. Gilbert, Richard Inglis, Edward W. Jenks, Henry F. Lyster, James F. Noyes and N. W. Webber. Intimately associated with these as founders of the Academy were five men still living: W. H. Lathrop, of Lowell, Mass.; S. P. Duffield, of Dearborn, Mich.; Theo. A. McGraw, Albert B. Lyons and Henry A. Cleland, of Detroit.

Their nationality: The eight founders were born in eight different countries or states: Andrews in the Sandwich Islands, Bigelow in Vermont, Gilbert in Canada, Inglis in Scotland, Jenks in New York, Lyster in Ireland, Noyes in Rhode Island, Webber in Maine; thus the Puritan stock predominated, reinforced by fresh Irish, Scotch and Canadian—surely if blood counts, our founders stood at the top.

Their general education: Only Lyster possessed an A. B. degree; the rest obtained a school education equivalent to that needed for entering college. To this some had added the discipline gained by teaching school; others had worked as clerks in stores, general or drug; some had that peculiar university education obtained only by growing on a farm with intelligent parents; several were natural book-worms; for practical purposes they were well educated.

Their medical education: Our found-

ers gained their medical training—from private preceptors; medical colleges; post-graduate work; hospital service; or study with European teachers. As they were born in eight different states, so they received their doctor of medicine degrees from eight different colleges: Andrews from the College of Physicians and Surgeons, New York; Gilbert from the medical department, University of New York City; Bigelow from Medical College of Ohio; Jenks, Castleton Medical College, Castleton, Vt.; Inglis, Western Reserve Medical College, Cleveland, O.; Lyster, medical department, Michigan University; Noyes, Jefferson Medical College, Philadelphia, Pa., and Webber, Chicago Medical College. Thus they brought to the founding of this Academy the best equipment of eight leading medical colleges, the precepts and lives of at least a hundred of the most celebrated physicians and surgeons of their time.

The age of the founders of the Academy: All were young men, Dr. Inglis alone settling in Detroit before the civil war. Near the same time, these young men began their struggle for position and practice in a large field which had been neglected through the exigencies of the war. Jenks, Noyes, Gilbert, Bigelow, had won success in smaller fields; Lyster and Webber had served in the civil war; Andrews in a government hospital; thus, while all were young men, none were novices—all had won some success and all suffered some defeats—they were thus ready for the best work of their lives.

*Read before the Detroit Academy of Medicine, Feb. 25, 1908, on the occasion of its Fortieth Anniversary.

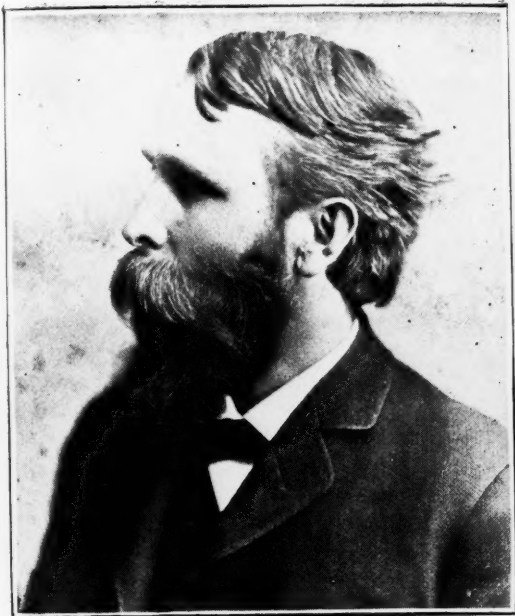
To grasp the significance of the founding of the Detroit Academy of Medicine, it is necessary to briefly recall the events preceding September 21, 1869, and the conditions then existing. In 1850 the medical department of the University of Michigan was founded; in 1852 to promote its interests, the *Peninsular Medical Journal* was started; in 1855 the Outs started the *Medical Independent*; in 1857 financial and other forces compelled a truce to the conflict between the Ins and Outs. During this period most earnest efforts were made to remove the medical department to Detroit—as they called “a spade a spade” in those days, the copy furnished medical journals was highly seasoned. During this contest, the Detroit Medical Society and the Michigan State Medical Society suffered greatly in influence, until, with the near approach of the civil war, both went into hibernation.

At the close of the war, medical societies and journals had to be started, and the growing clinical resources of Detroit utilized. At least one of our founders, while studying in Bellevue Hospital, had familiarized himself with the situation in Detroit, determined to make that city his future home, and discussed the founding of a medical college there with the late Austin Flint. On reaching Detroit he made the acquaintance of other of our founders, broached his ideas to them, and together they planned for the future. The wives of some of these founders used to tell of protracted meetings they held while whittling and sitting on a Shelby street fence during the long summer evenings of this period. Possibly these meetings were responsible for the issue to the medical public in April, 1866, of the “*Detroit Review of Medicine and Pharmacy*,” edited and published by E. W. Jenks, George P. Andrews, Theodore A. McGraw and S. P. Duffield. On the following May 3 the same parties were active in forming the third epoch

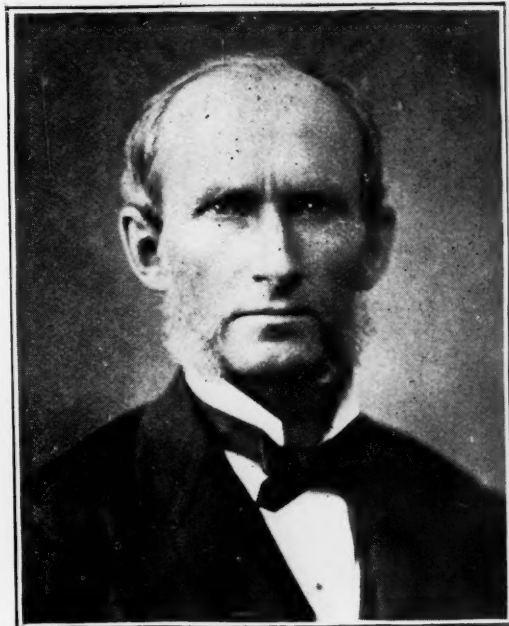
of the Wayne County Medical Society. On the following June 5 the same parties and their friends were active in organizing the third epoch of the Michigan State Medical Society. Note that during the months of April, May and June, 1866, a medical journal, a local County Medical Society, and a State Society were launched—all engineered by our founders and their friends. The *Journal* (under different names) continued its work twenty-eight years, and the county and state societies, with evolutions to meet changed conditions, have grown to their present magnificent proportions and influence.

These steps were but preliminary to far more extensive plans. In a brief period our founders and their friends had secured control of all the hospitals in Detroit; a number of business men of the highest social standing were influenced to finance a new medical college and act as its trustees. This college was organized in 1868, manned by our founders and their friends, and named the Detroit Medical College.

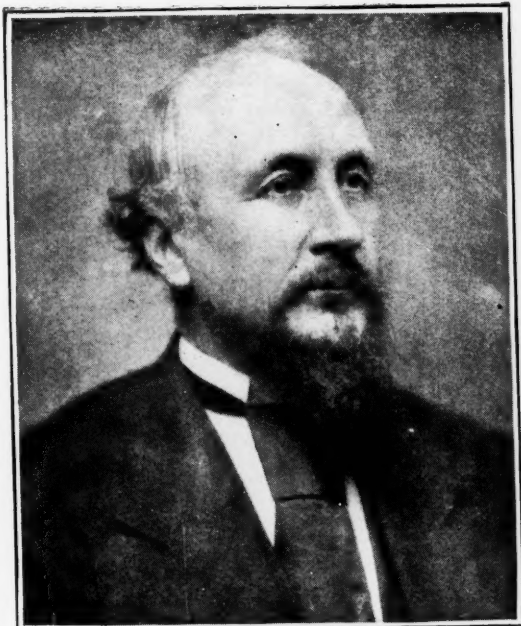
It was soon realized that medical teaching was an art new to our founders, to aid them in acquiring which they organized the Detroit Academy of Medicine. This brought all the teachers into closer fellowship with each other and their friends; it cultivated their powers of public speech and familiarized them with each other's stock of knowledge; it placed their best work, through their medical journal, before the physicians of Michigan and adjacent states; it furnished a rallying ground as against the “outs” they had created by their capture of the hospitals, and superior advertising facilities. For its purpose it did not want “outs,” and so provided a “Club Medical Society.” From the beginning it was a success, and has continued such. Its relations to Detroit Medical College long since ceased; those congenial to existing members were welcomed, irrespective of their associations



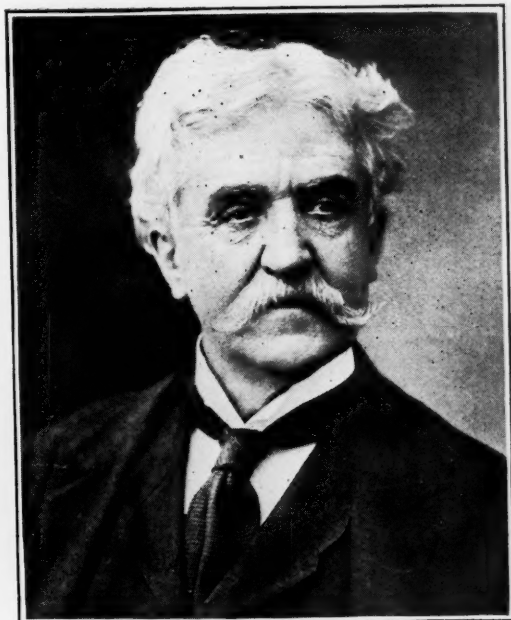
George Pierce Andrews



Caleb B. Gilbert

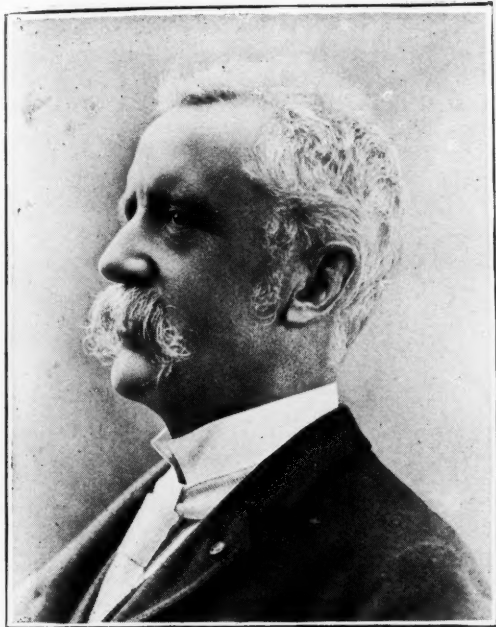


Richard Inglis

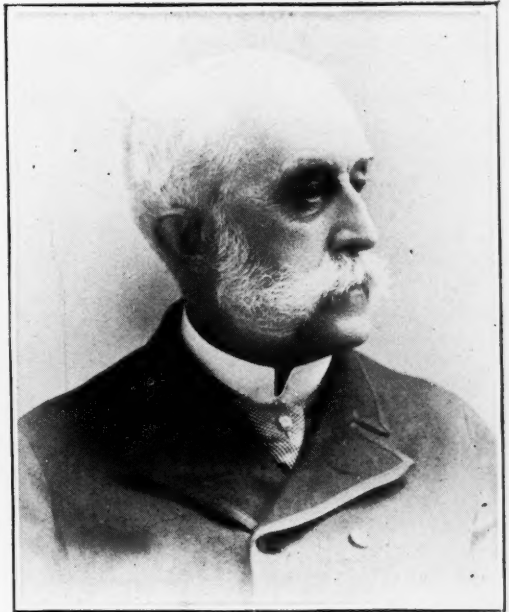


Edward M. Jenks

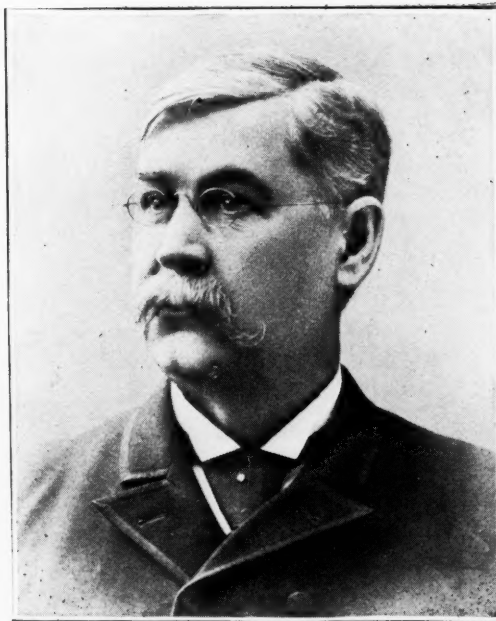
104



Henry F. Lyster



James Fanning Noyes



Nathaniel W. Webber

U of M

1000

—the aim being to furnish a chance for a small number of educated medical gentlemen to fellowship more closely than is possible in a larger body; to aid the neophyte to learn to think on his feet; to augment the esteem in which the profession of Detroit is held.

The founders as medical teachers: Except Lyster, all of the founders were teachers in Detroit Medical College; Dr. Jenks was teacher in the Medical Department Bowdoin College, Me., and later in the Chicago Medical College; Lyster was teacher of surgery and medicine in the Medical Department University of Michigan, and later teacher in the Michigan College of Medicine.

The founders as hospital physicians: Andrews was on the staff of St. Mary's, Harper's, Woman's and Children's; Jenks was on the staff of St. Mary's, Harper's and Woman's, and Mercy Hospital in Chicago; Noyes on St. Mary's, Harper's and Woman's; Gilbert on St. Mary's; Inglis on Harper's and St. Mary's; Bigelow on the Marine Hospital; Lyster on St. Luke's. All the teachers of practical medicine and surgery had out-patient clinics, so that students and physicians were brought very close to the examination and treatment of all sorts of disease. Our founders were among the first to emphasize practical clinical teaching.

Our founders encouraged, so far as practicable, the evolution of practice into special fields, believing that thus the greatest advantage would come to all, by the transformation of more of the unknown into the known. Very early they equipped histological, physiological and pharmaceutical laboratories, in addition to the chemical and anatomical, that the student might confirm or refute the statements of his teachers or text-books and come into contact with nature's things and forces. Our founders were active in lengthening the time of study, in arranging the several departments in separate courses instead

of taking all the courses at the same time; in adding recitations to lectures; in introducing the Socratic method, to the entire system of teaching.

Our founders as members of Medical Societies—They did not limit themselves to the Detroit Academy of Medicine, but took an active part in all societies within their reach, so promoting their evolution to their present high standard. Those living in Detroit at the time were founders of the Wayne County Medical Society; the Detroit Medical and Library Association, and the Michigan State Medical Society. Of the others Andrews was a founder of the Detroit Obstetric and Gynecological Society and member of the American Medical Association; secretary of the Michigan State Medical Society in 1866; president of the Detroit Academy of Medicine in 1876.

Bigelow was a founder of the Ohio Medical Society and a member of the Michigan State Medical Society.

Gilbert was president of the Detroit Academy of Medicine in 1875; president of the Detroit Obstetrical and Gynecological Society in 1887; and member of the American Medical Association.

Inglis was president of the Detroit Academy of Medicine, 1869-70; president of the Michigan State Medical Society 1869; vice-president in 1868; president of the Detroit Medical Society (No. 1) 1854-55; vice-president of the Wayne County Medical Society 1850; member of the American Medical Association.

Jenks was vice-president of the Detroit Academy of Medicine 1869; president 1873; president of the Detroit Obstetrical and Gynecological Society 1888; president of the Michigan State Medical Society 1873; president of the Detroit Quarter Century Medical Club 1898; chairman section of obstetrics, American Medical Association 1878; founder American Gynecological Society; member Illinois State Medical Society; mem-

ber Chicago Medical Society; honorary member of the Cincinnati Obstetrical Society; honorary member London Obstetrical Society; member American Association for the Advancement of Science.

Lyster was treasurer of the Detroit Academy of Medicine 1869, and president in 1871; director of the Wayne County Medical Society for five years; member of the American Medical Association; corresponding member Boston Gynecological Society; member National Society Railway Surgeons; member National Association Medical Directors of Life Insurance Companies; member Military Order Loyal Legion of U. S.; for many years member of the Michigan State Board of Health.

Noyes was president of the Detroit Academy of Medicine 1872-73; a founder of the American Ophthalmological Society; member of the American Otological Society; member American Medical Association; honorary member of the Texas State Medical Society; member Maine State Medical Society; member Rhode Island State Medical Society.

Webber was a member of the Michigan State Medical Society and of the American Medical Association.

All our founders were Republicans.

As to their formal religious creed: Andrews was a Congregationalist; Bigelow a Catholic; Gilbert and Webber Methodists; Jenks and Inglis Presbyterians; Lyster an Episcopalian, and Noyes a Unitarian—but all were tolerant of the views of each and content to let the world worship God by its own methods if only good citizenship was promoted thereby.

Founders' Personal Characteristics—It were not unfair to estimate the deceased by the living, some of which are with us tonight, and all but one are well known. I may be permitted to direct attention to the business turnouts of the founders. Bigelow and Webber did their business on foot; Andrews and

Lyster's carriages resembled the one-horse rigs of a seedy country parson; carriage none too good, harness illy kept; horse lacked proper grooming—all exhibiting a lack of personal interest in their teams. This was the more noticeable because their dress and manners were those of perfect gentlemen.

Gilbert rarely used a carriage, but when he did it was a ladies' phaeton, always trim, neat and clean, like himself.

Inglis drove a single buggy, perfectly equipped for the exacting demands made upon it, relays of horses being provided.

Noyes dashed through the streets in a careless manner in an old-fashioned doctor's chaise, provided with hickory springs, drawn by a moderate sized white horse. At a later period he drove a spirited bay team before a Johnson's covered buggy, but his reckless driving caused him divers troubles.

Jenks in his prime had a stunning turn-out; a team of spanking bays before a Portland buggy, driven by a stylish coachman, all resplendent with the most perfect care—showing that he loved a good horse, perfectly groomed and well fed, but not overworked.

Our Founders' Family Life—All but Noyes were married, one or more times; five were survived by their wives; the seven by twenty-three children; four left sons practicing medicine, viz.: Lyster, Jenks, Inglis and Webber. The homes of the founders were each, in its peculiar way, models—the nurseries of good citizens. While Noyes was a bachelor, he was a founder of the Oak Grove Asylum at Flint, and personally erected a building suitable for the amusements of the inmates, so increasing the value of their treatment; for years he supported one or more needy youth while qualifying themselves to earn an independent living; he also endowed a bed in Rhode Island Hospital for perpetual occupancy by some sick, poverty-stricken person.

Our Founders' Financial Rewards—

None was rated a millionaire; none died in a poor-house. Eliminating property inherited, married, or from investments, having an unusual rise in value, it may be doubted whether these rewards were much in excess of a good living for the doctor and his family; a good education for his children, and a modest balance for the inevitable rainy day.

As to the Causes of Our Founders' Deaths—Andrews died from an obscure nervous affection; Bigelow from apoplexy; Gilbert and Webber from cancer of the stomach; Inglis from infection; Jenks from pneumonia; Lyster, pernicious anæmia, and Noyes from heart failure; the youngest at death was Dr. Inglis; the oldest Noyes, aged 51 and 79 respectively.

Finally—Our founders were *men*, bred from the world's best stock; well educated for their time; inspired by high political, moral and religious standards; moved by lofty ideals for the betterment of their profession and country; ambitious for highest achievement. They built true homes and left families to perpetuate their names and influence—never permitting a breath of scandal to touch them or theirs.

Our founders were *physicians*, trained by the best teachers of their age, and earned the reputation of competent, honorable practitioners, trusted alike by their fellow doctors and the laity.

Our founders were *teachers*; the waste clinical material in Detroit they arranged so as best to serve both undergraduates and practitioners; they adopted and encouraged others to adopt rational methods of teaching; in this academy they were teachers and in other city and state societies; through their Medical Journal they were teachers to an ever widening audience.

Our founders were *leaders*; entering the vacant field after the civil war, while others attended to their individual business, our founders gathered up the neglected material and builded a series of medical societies, a journal, and the Detroit Medical College—they led the way to a communal life.

Our founders were *producers*; they wrote papers of temporary interest and more or less permanent value; they engaged in discussions that clarified thought; sorted true from false observations—so laying a solid basis for successful practice.

Unconsciously their methods and spirit fell upon new fellows, theirs on others, and others, forming a network of related human activities impossible to trace.

Outside the technique of medicine and surgery, the spirit and lives of our founders were important factors in promoting the upbuilding of Detroit, Michigan, and our fatherland.

BRIEF SUMMARY REGARDING THE BATH TREATMENT AT MT. CLEMENS IN REFERENCE TO NERVOUS PATIENTS.

RICHARD LEUSCHNER, M. D.

Mt. Clemens.

According to my observations there are approximately two groups of nervous patients that come to Mt. Clemens for rest and bath treatment. In the first

we meet the overworked business and professional man, the careworn housewife and mother, the society woman and those battling with menopause. In the

second group we encounter those suffering from tedious convalescence incident to the consequent exhaustion from prolonged illness.

The effects of the baths experienced on the different patients were quite varied and interesting, and, after mature deliberation I could establish the following principles:

(a) That all of the nervous patients tolerate the baths and feel comfortable only at temperatures ranging from 89° to 96° F.

(b) Patients experienced a decided chilly sensation, even more so than those suffering from rheumatism, when the temperature sank below 89° F.

(c) At temperatures exceeding 89° F. and higher, patients would manifest a pronounced excitation of the nervous system, followed not infrequently by a greater and prolonged exhaustion.

(d) Patients suffering from tedious convalescence with nervous exhaustion, where local structural changes, accumulation of cells in the neuroglia, etc., are apparent, such as we observe in most all metabolic disturbances, obtained the best results when baths were administered not longer than ten minutes, coupled with a very gentle or no manipulation in the mineral water whatsoever. In such cases the shorter bath with its consequent milder stimulation of the cutaneous nerves and lesser absorption of the minerals into the system was advisable, because the longer bath of twenty minutes and its prolonged excitation to the skin and increased absorption of the bath water would have had a more decided action and effect

upon the lymph movement and the circulation of the blood resulting in forced pressure upon the diseased areas of the body. Therefore only the ten-minute bath extending its milder stimulus could be used without any discomfort to bring about the absorption of infiltrations in the nerve connective tissue, etc.

(e) Patients belonging to the first group and presenting as a rule a very poor conductibility of the nerve currents and channels, would receive the most beneficial effect from the bath of somewhat longer duration, perhaps from 15 to 20 minutes, aided by an ample and not too forceful massage, at a temperature of the water, however, wherein the bather would manifest at the inception of the bath a decided feeling of bodily comfort. That body comfort would generally begin to prevail at 89° F., ranging to 96°, according to the susceptibility and condition of the patient's organism, but never was it necessary to go higher. In this prolonged bath generally the temperature had to be kept uniform by the gradual addition of warmer water.

As a rule, individual treatment was indicated with the nervous patient more so than the rheumatics, and by the careful gauging of the temperature of the bath in every single instance the results obtained proved entirely satisfactory, showing, according to the observations gathered, that baths between 89° and 96° are most essentially correct, and consequently avoiding in this way too strong a deviation in the blood pressure, lymph movement and excitation of the nerve courses.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

Subscription Price, \$2.00 per year, in Advance.

JUNE

Editorial

Metchnikoff's theory of the cause of old age, recently set forth, has created much interest and not a little ridicule. The Germans have taken it as a sign that the grand old man is approaching his anecdotage, but it is to be suspected that he is no fanatic vainly seeking for the spring of perpetual youth; rather, that he has an idea which he is quietly testing upon himself, as he sits in his laboratory, with a bowl of *yoghurt* on the bench beside him.

Now *yoghurt* is a curdled, sour milk, made by adding to fresh milk a ferment called *maya*, and is much used, as an article of diet, by the inhabitants of Bulgaria. While traveling in that country, in company with Professor Duclaux, formerly director of the Pasteur Institute, Metchnikoff became impressed with the very large proportion of old men, strong, well-preserved, and active, whom they met. It has long been known that the Bulgarians are a particularly long-lived people. Indeed, reliable statistics show that out of a population of some two and one-half millions, there are about three thousand centenarians, a number of whom, on good authority, are from one hundred and ten to one hundred and twenty years of age. Why these people are thus favored has not been known.

Metchnikoff, however, analyzed the

facts and found that there is nothing unusual in the country and nothing uncommon in the habits, customs, or manner of living of the people, with the single exception that this *yoghurt* forms a staple of diet, second only to the staff of life. It is in daily use by young and old. He investigated the ferment used, *maya*, and found that it consists of various strains of lactic acid bacilli, chief of which is a large organism called "bacillus of Messol," from the Swiss bacteriologist first identifying it. When added to fresh milk, this bacillus forms an unusually large amount of lactic acid, but when acting alone, it also breaks down the fat and gives to the milk a rancid taste. However, when used in conjunction with other strains of lactic acid bacilli, as in *maya*, this fat-destroying property is inhibited, so that the resulting sour milk is not unpleasant to the taste.

This bacillus has another characteristic in which it is different from other bacilli of the lactic acid group. It is very resistant and can travel throughout the intestine, without suffering harm. It can be recovered readily in cultures made from the excreta.

Now Metchnikoff, if we understand him aright, looks upon old age as a chronic disease, and the changes incident to it, as analogous to those which take place in chronic infections and intoxications. The infection or intoxication is from the absorption of ptomaines and other poisons produced in the intestine by the putrefactive bacteria. The irritation caused by these elaborated poisons results in a proliferation of connective tissue and a destruction of the parenchyma of all the organs, bone, muscle, arteries, brain, liver, kidney, ending with atrophy and degeneration. As Thompson, in his delightful "*Glimpses of Medical Europe*," puts it, "the flora of the gastro-intestinal tract are trying to hand the arteries a lemon." And we use the term "lemon" advisedly, for the body

may be compared to that much maligned fruit, which consists of pulp and juice. When we are young we are "full of juice." Old age is the replacement of juice by fiber. Just as a fruit goes "woody," so in old age the parenchyma of the liver, kidneys, and other organs is replaced by fibrous stroma. "Why not," says Metchnikoff, "combat these organisms by introducing bacteria of an opposite sort?"

That's the point. Fight the putrefactive bacteria in the intestine and put the Angel of Death to rout! That is the theory in a nutshell.

The *Bacillus of Messol* is the warrior selected to make this fight, for he decomposes the starches and sugars and hurls the lactic and succinic acid thus formed at the defenseless aborigines of the colon, until they succumb and cry "Long live the host!"

The theory is, at least, an ingenious one and is now being given a trial in France, where tablets of *bacillus Messol* and associates are being prepared and sold under the name of "ferment-lactyl."



There is nothing especially novel in the idea that buttermilk as an article of diet possesses certain peculiar virtues. In the field of pediatrics especially its use in certain parts of the world is known to date back some centuries—not merely as a substitute for breast milk for the healthy child, but also as a therapeutic agent in the treatment of certain intestinal disorders. As early as 1768, for instance, we find it mentioned in Basle as a preventive of dysentery. In its natural form, as a by-product in butter-making, it seems to have been widely used by the laity as an infant food in such countries as Holland, and was, of course, open to many objections, especially on the score of doubtful clean-

liness and the presence of many varieties of bacteria, not all harmless, and products of their growth other than lactic acid. Ballot, in 1866, introduced the method of preparation of buttermilk for infants which is most in use today—namely boiling, with the addition of flour and sugar. This method received little attention until it was revived in Holland by de Yager in 1898, when its use spread rapidly to Germany, France, other parts of Europe and to South America. Today it holds a very high place all over the world as a food for infants, especially in some pathologic conditions, and in many regions would be considered indispensable. Though ordinary buttermilk from the dairy is most commonly used as the basis for this food, many prefer skim milk artificially soured by pure cultures of the lactic acid bacillus, or some similar organism. Few use it uncooked. Moll adds alkali in the cooking for the purpose of giving it a more pleasant taste, and obtaining more of the proteids in solution. Many reasons are given for the good results observed from the use of buttermilk. It is generally recognized that the casein in properly prepared buttermilk is present in a condition peculiarly well suited to digestion by the infant, and that the acidity of the milk probably favors gastric activity. Moreover, the very low fat content is advantageous in cases of deficient fat tolerance. The stools under the administration of buttermilk are invariably alkaline, and in acid fermentation the complete change in the reaction of the intestinal contents, and the resultant alteration in the flora may evidently be of benefit. Tissier, in publications from the Pasteur Institute in 1903 and 1905 seems to have been the first to call attention to the antagonistic action of the lactic acid bacillus to certain harmful intestinal bacteria, now so generally recognized and to have made intentional use

of it in therapeutics. Today it is well understood that among the few intestinal antiseptics that have any real value for the infant, buttermilk holds a place in the first rank.

Some question has been raised as to whether this action is due to the living bacilli or the lactic acid, but there is little doubt that the living bacillus, as present in raw buttermilk, is much more effective for this purpose. Buttermilk seems to have its greatest value in infantile atrophy and similar conditions, and as the first milk food in convalescence from acute intestinal disturbances. Prolonged administration occasionally causes untoward symptoms, such as "buttermilk fever," which necessitate its withdrawal.



The subject of psychotherapy occupies a constantly increasing space in modern literature. The American habits of living apparently give rise to a large proportion of nervous phenomena, whose nomenclature, classification, pathology, and therapy, are topics of frequent discussion, not to say debate. The indifference of physicians to these various disorders has compelled the sufferers to seek other ministrations, and according to the law of supply and demand, there have arisen various movements, such as Christian science, mental healing, faith-cures, and other lesser fads. The success of these movements with patients of a certain type, who may be included under the term "psychasthenics," has stimulated in the medical profession a new interest, leading to vigorous efforts to place psychotherapy upon a well-recognized basis and to divorce the therapy of *suggestion* from that of true hypnotism, which still labors under the ban of widespread suspicion and disapproval. There is a growing recognition of the fact that Christian science, for

example, accomplishes by its gentle persistency many a remarkable cure in persons of ill-controlled volition,—persons who are victims of an exalted or depressed nervous state, who have lost the power to inhibit sensations of mental and physical discomfort, and whose central and peripheral sensations are subject to gross exaggeration.

The Christian science movement has seriously menaced the public health in some respects, and has called forth fitful prosecution from municipal and state authorities, but the great body of the medical profession has been content for the most part to ignore the inroad upon their own work and to overlook the modicum of truth in Christian science healing. It has remained for the Church to point the way. The Episcopal Church in Boston produced a man, the Rev. Ellwood Worcester, who perceived that Christian science as a religion rested its success upon the claim of curing human illness; that its methods of cure involved spiritual ministrations; and that the orthodox creeds could as well apply such methods in their essence, without the mystery, deception, and fallacies inherent in the "Science."

The meaning of this departure among the clergy has been explained in Detroit by a series of talks by Rev. Mr. S. S. Marquis, who has been much interested in the subject. More recently the matter was presented by its originator at an Episcopal convention in this city, and discussed pro and con by other clergymen, physicians, and laymen.

The significance of this movement towards mental therapeutics among non-medical circles is two-fold; first, it means that it is an important factor in the treatment of certain diseases; second, that the medical profession has not supplied the demand for it,—a demand that is legitimate and reasonable. It therefore remains for the neurologists and alienists to continue their own good



beginnings in this respect, and for the general practitioners to familiarize themselves with the scientific basis of psychotherapeutics, and with the necessary details for carrying it out. The literature is growing more and more rich in this subject every month, and the meaning of it should not be lost upon practitioners of medicine.



The Annual Meeting. At this writing the arrangements for the annual meeting, our forty-third, to be held at Manistee, on Wednesday and Thursday, June 24th and 25th, are practically complete.

The scientific program, published in full in this issue, has never been surpassed in point of interest at any of our meetings. It covers a large variety of topics, so that every one, no matter what his interests may be, will find something—many things—in it which will be attractive. We are to have with us two representative men from outside the state. Dr. Hugh T. Patrick, Clinical Professor of Nervous Diseases in the Northwestern University, will address the medical section on Wednesday afternoon. The subject of Dr. Patrick's paper, "Remarks on Apoplexy," is a practical one and will receive close attention. On Thursday morning, Dr. Joseph C. Bloodgood, Associate Professor of Surgery in Johns Hopkins University, will speak before the general session. The subject of Dr. Bloodgood's address has not, as yet, been announced.

Too much praise cannot be given the local committees at Manistee for the arrangements which they have made. All the scientific meetings will be held under one roof, so that the members will lose no time in going from place to place. All sessions will be held in the Elks' Temple, where the registration office will also be located. The entertainment on Wednesday evening will be unique. We shall trust the local com-

mittee to give us a good time, our part being merely to be on hand at the boat dock at four o'clock.

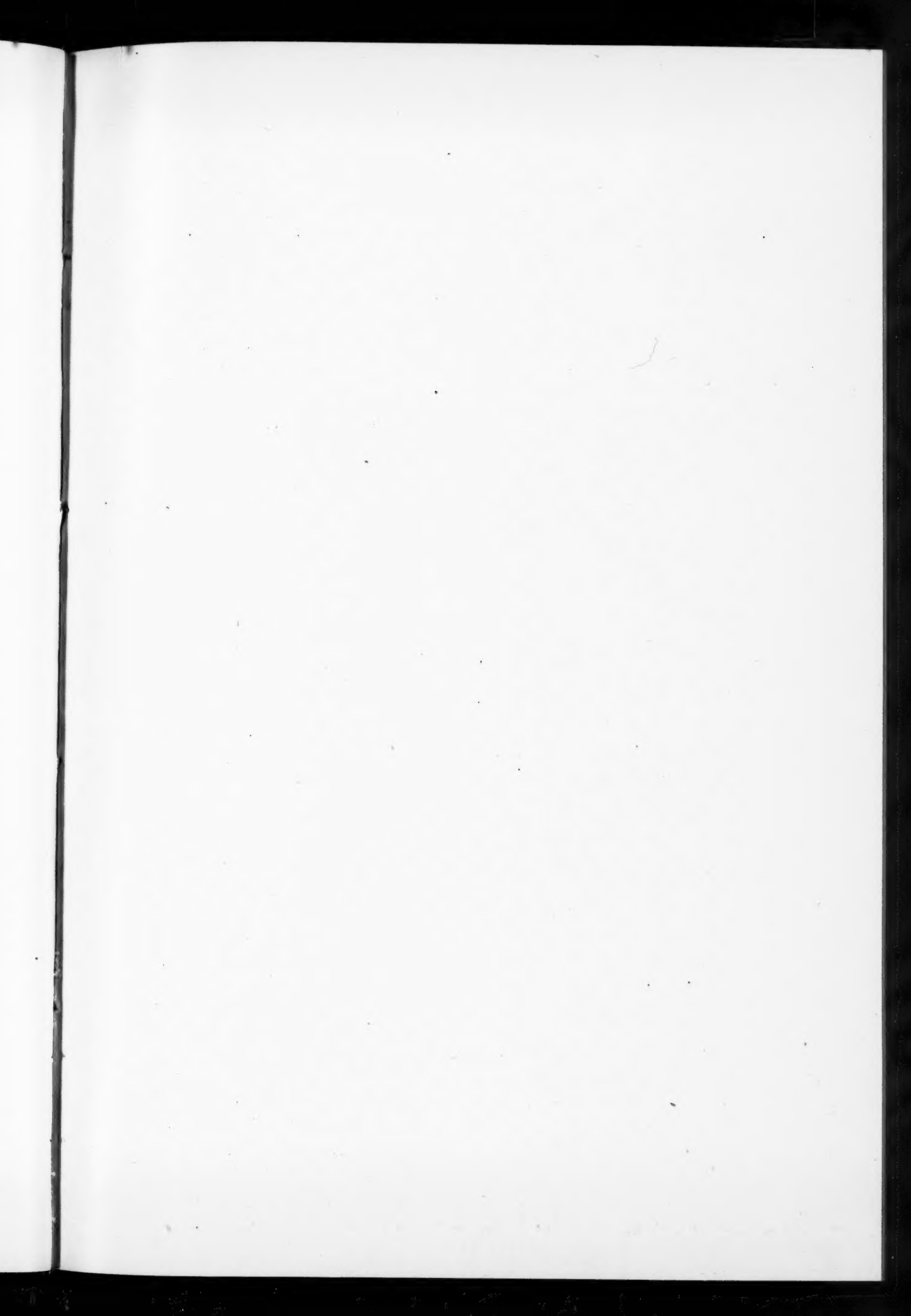
The general arrangement of the program will be: Tuesday afternoon, meeting of the Council; Tuesday evening, first meeting of the House of Delegates; Wednesday morning, meeting of House of Delegates at nine o'clock and general session at ten o'clock. Addresses of welcome, the President's address and nominations for president for next year will occur at this time. At one-thirty the sections will convene for a two and one-half hour session. From four o'clock until eleven come a boat ride and other pleasures. Anyone caught "talking shop" will be fined. Thursday morning, the sections will meet from eight-thirty until eleven, at which hour Dr. Bloodgood will address the general session. Thursday afternoon will be devoted to section work, adjournment taking place in time for the departure of trains.

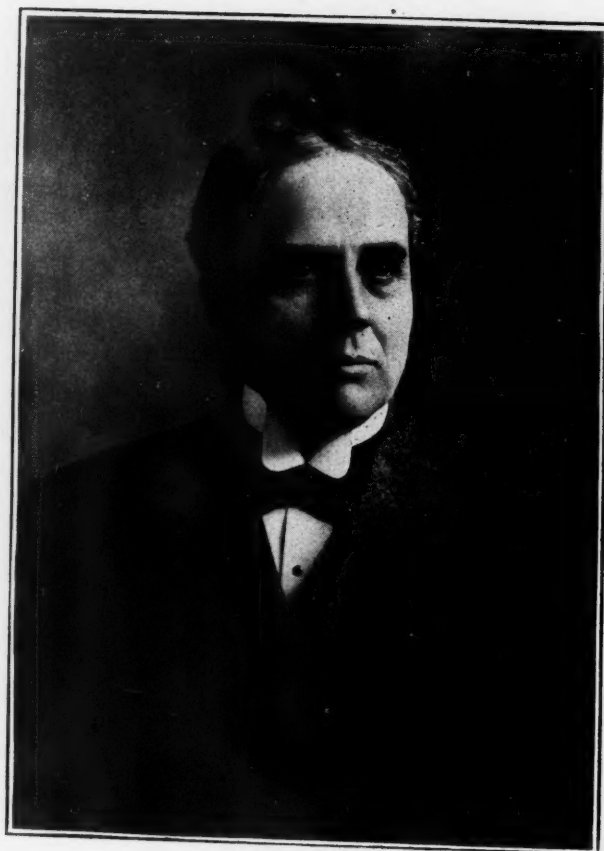
There will be no railroad certificates to test the patience this year. Since the enactment of the two-cent law, conventions are not favored by the former "fare and one-third" rate. The price, however, remains the same as formerly, namely four cents per mile for the round trip, in place of three cents going and one cent returning.

"Every physician should deem it his duty, privilege and pleasure to attend the annual meeting, for he who has the welfare of his profession at heart, should not fail to devote these few days at her shrine, as no greater impetus for the hard work of the coming year can be given than the approval of the individual member expressed by his presence."



Shall we meet in the fall? There is a growing sentiment throughout the state for a change in the time of holding the annual meeting. As it is now arranged the meeting of the American Medical





Herman Ostrander, M. D.

President, 1907-1908

Association and those of various special societies come so close together that it is often difficult to arrange non-conflicting dates and impossible for many members to attend both the national and

state meetings. It is believed by many that a date in late September or October would be more acceptable to our members. The question will probably come up at Manistee. Think it over and come prepared to discuss it.



HERMAN OSTRANDER, M. D.

President, 1907-08.

For over twelve years the writer of this sketch has been associated with Dr. Ostrander. Together they have shared the vicissitudes of asylum life, together they have met disappointments and pleasures so that no one was more pleased than the writer to see his friend and co-worker elected to the presidency of the State Medical Society last June, feeling at the same time that the man honored the office.

Dr. Ostrander is a native of Michigan, having been born in Ypsilanti in July, 1856. When he was two years old, his parents moved to Lansing traveling by stage. It was then he first gave indication of that musical talent which in later years was to be such a delight to his friends, for he tells us "I squalled all the way." His early education was received in the public schools of Lansing and Jackson. Like so many of our medical men, he himself taught in the country schools until he was prepared to enter the Medical Department of the University of Michigan, from which he graduated in 1884.

After graduation, he entered practice at Lansing and held for three years the position of physician to the State Reform School for Boys. In 1888, he gave up general practice to enter the Michigan Asylum for the Insane at Kalamazoo as

assistant physician and was soon placed in charge of the colony of the institution. This system of caring for the insane, he was instrumental in developing and has always warmly advocated. While deeply interested in his work, Dr. Ostrander has never allowed his specialty to narrow him, but has kept up his interest in general medicine. At frequent intervals, he spends some weeks in the big medical centers, keeping abreast of the new in surgery and therapeutics. He has contributed to the leading journals and has taken active part in the medical societies of his home city, serving as secretary of the Kalamazoo Academy of Medicine for three years and filling the office of president for the year 1903. Last February, a local society for the prevention of tuberculosis was formed in Kalamazoo, and to Dr. Ostrander was given the honor of its presidency.

To know Dr. Ostrander well is to like him. He is broad minded, generous and considerate, has a genial disposition and is noted for his ready wit. He has ever been popular with his fellow practitioners and the many positions of trust and honor he has been chosen to fill, testify as to the high place he holds in his profession.

G. F. INCH.

Book Notices

Chronic Constipation and Allied Conditions. By J. Alexander MacMillan, B. A., M. D. Quarto, 257 pages; cloth, \$2.00. Kansas City, The Burton Company, 1908.

This book, written by one of the Detroit members of our society, is an interesting and instructive one. Moreover, it contains many practical points of importance, put forward in such a clear and concise manner, that they cannot fail to be helpful to the reader. It is on an important subject, one in which every medical man, no matter in what line he may be engaged, is interested and as the book is the outcome of the author's clinical experience, it cannot help but be a valuable aid to the practitioner.

The first chapter deals with the anatomy and physiology of the large bowel, the etiology of constipation and obstipation, diagnosis and the methods of rectal examination. Then follow chapters on the treatment of constipation, chronic colitis, and obstipation. Auto-intoxication receives attention in chapter eleven, and chapter twelve gives the complete histories of twenty-five illustrative cases.

While no method of treatment is neglected, special emphasis is laid upon the mechanical treatment by means of rectal tampons. The author has been most successful in his work along this line and has here given his experience fully and explicitly.

Dr. MacMillan is to be congratulated on his book. It should be widely read, for it is valuable.

Outlines of Psychiatry. By William A. White, M. D., Superintendent, Government Hospital for the Insane, Washington, D. C., Professor of Nervous and Mental Disease, Georgetown University, New York—The Journal of Nervous and Mental Diseases Publishing Company, 1907.

This volume is No. 1 of the Nervous and Mental Disease Monograph Series and its author modestly disclaims any expectation that it will displace the larger textbooks. He has, and with marked success, endeavored to simply and intelligibly place before the student a working knowledge of psychiatry.

After a physiological introduction, the definition, classification and treatment of insanity are discussed and then follows an excellent chapter upon the general symptomatology of mental disease. The chapter upon the examination of the

insane ought to illumine a field where too often dense ignorance prevails and it should be of distinct service in its hints as to methods of examination best calculated to elucidate the mental status.

The remainder of the book is devoted to a concise but clear presentation of the various forms of mental disease.

This is one of the best of the smaller works on psychiatry and will provide just what many students and not a few practitioners have long desired. It is printed in clear type on excellent paper.

Nervous and Mental Disease. For Students and Practitioners. By Charles S. Potts, M. D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia. New (second) edition, thoroughly revised and greatly enlarged. In one 12mo. volume of 570 pages, with 133 engravings and 9 full-page plates. Price, cloth, \$2.50 net. Lea & Febiger, Publishers, Philadelphia.

This manual, of which this is the second edition, enlarged and brought down to date, is convenient in size, attractive in appearance and full of good things.

Its arrangement of subjects is excellent and if its size forbids great fulness, what is found here is well-said and to the point. Its illustrations, both original and borrowed, some of them in colors, are excellent. The practitioner who has digested the contents of this volume will be well-equipped for such neurological problems as he is apt to encounter in every-day practice and the student can here well ground himself in a field of medicine quite generally neglected.

Sixty pages can hardly do fair justice to the field of mental diseases, but the subject is probably as well presented as is consistent with so great condensation.

Glimpses of Medical Europe. By Ralph L. Thompson, M. D., Professor of Pathology, St. Louis University School of Medicine. Quarto, 235 pp., Illustrated. Philadelphia, J. A. Lippincott Co., 1908.

"One who lays no claim to being a literary man should not write a book to begin with. And of all subjects that might be chosen, a book on Europe is the one that most requires an apology. However, I am not going to apologize for the present volume, because I did not want to write it anyway. It began by my sending home a few letters to an editor who wanted to fill up a certain amount of space. Once started, it just naturally grew into its present form."

So says the author in the introduction and the above paragraph is typical of the spirit of the book. It is delightfully entertaining and, although filled with most useful information, it is in no sense a Medical Baedeker.

The author "glimpses" at the clinics, hospitals, professors, cafes and pensions, in Christiana, Copenhagen, Stockholm, Upsala, St. Petersburg, Berlin, Vienna, Paris, London and Liverpool. The illustrations are good. There is not a dull page in the book. Being attractively printed and bound, it would make a pleasing gift book for a medical friend; a gift sure to be appreciated.

County Society News

First District.

On Wednesday, April 29, the fourth annual meeting of the First Councilor District Medical Society was held in Detroit at the Fellowcraft Club, corner of Wilcox and Farmer streets. In the afternoon there was a program of original papers, at which there was an attendance of about 75, and in the evening a banquet, at which 87 were seated. No business was transacted, but the papers occupied all of the afternoon session, and brought out pointed discussions.

Program:—"Nicotine Tolerance," C. W. Edmunds, M. D., Ann Arbor; "Sensitization and Its Relation to Practical Medicine," V. C. Vaughan, Jr., M. D., Detroit. "Report of a Case of Hereditary Chorea," Jason Morse, M. D., Pontiac; "Cystoscopic Findings in Cystitis," Ira D. Lorce, M. D., Ann Arbor; "Plastic Roentgenography," P. M. Hickey, M. D., Detroit; "Emphyema," G. H. Lamley, M. D., Blissfield.

The banquet, with Dr. Reuben Peterson, of Ann Arbor, as toastmaster, provided an enjoyable series of toasts: "The First Councilor District Medical Society," George Dock, M. D., Ann Arbor; "Wanted—A Family Doctor," Frank B. Tibbals, M. D., Detroit; "Medicine and the Church," Rev. Lee S. McColester, Detroit; "Medical Education in Michigan," Flemming Carrow, M. D., Detroit; "Medicine and the Law," Judge Alfred J. Murphy, Detroit.

The officers and committees in charge were as follows: George Dock, M. D., councilor; A. N. Collins, M. D., president; W. D. Ford, M. D.,

secretary. Executive Committee—Carl S. Oakman, M. D., chairman; Anna Starring, M. D.; C. J. Johnson, M. D., secretary Lenawee County Medical Society; Geo. P. Heath, M. D., secretary Monroe County Medical Society; C. E. Simpson, M. D.; A. J. Warren, M. D., secretary Macomb County Medical Society; C. D. Morris, M. D., secretary Oakland County Medical Society; J. W. Keating, M. D., secretary Washtenaw County Medical Society. Reception Committee—F. B. Tibbals, M. D., chairman; E. B. Forbes, M. D.; H. M. Rich, M. D. Florence Huson, M. D.; J. A. MacMillan, M. D.

Grand Traverse.

At the regular May meeting of the Grand Traverse County Medical Society, Dr. E. B. Miner read a paper entitled "The X-Ray as an Aid in Diagnosis," and showed a number of plates taken by himself to illustrate its usefulness.

Dr. M. S. Gregory has resigned his contract with the Order of Foresters and Dr. John Boyd, a graduate of the late Saginaw Medical College, has taken up the work.

SARA T. CHASE, *Sec'y.*

Huron.

The regular quarterly meeting of the Huron County Medical Society was held in Bad Axé, May 4. Dr. A. M. Francis read a paper on "The Diagnostic Significance of Pain," and Dr. W. J. Herrington one on "Leukæmia," with microscopical demonstration of the blood. Both papers were freely and lengthily discussed.

D. CONBOY, *Sec'y.*

Wayne.

At the meeting of the Wayne County Society, April 6, 1908, Dr. F. E. McClure reported the following case:

H. M., American, 82 years of age. Married. Both parents lived to be very old, does not know what they died of. Has lost track of his brothers and sisters. Habits exemplary. Smokes moderately. Has never used any drug. Denies any venereal infection or exposure.

I first saw him three months ago and found

his present wife to be his third one. She is 46 years of age and the mother of four boys, the youngest 7 years old. He has had children by both previous wives, but they are grown and gone. He has always been remarkably well and until his retirement was engaged in the life insurance business. Says he has never been sick excepting for a left hydrocele, which was drained ten years ago with no recurrence, except, he says, that the doctor injured the testicle at the time of operation, and it has been sore ever since.

Two years ago he had an attack of paralysis, beginning at the right great toe and during the ensuing two months it gradually spread upward along the right leg and side, and involved the right arm and hand so that for six months he could not use the right leg or hand at all. He gradually recovered from this and for the past year has been able to walk, feed himself and write, with great difficulty. Two weeks before I saw him, he had a sudden attack of paralysis of the left side. He was standing at the time and fell down and for two days could not walk. After that he could use his left arm and leg "as well as ever." But ever since this last attack he has suffered attacks of typical neuralgia of the fifth nerve on the right side. Bowels and urine normal.

I found a man remarkably well developed and preserved for his years. Thoracic and abdominal organs negative. Heart, particularly strong, all sounds clear, pulse 72, regular, volume good, arteries soft and compressible. Left testicle enlarged. In walking his right leg is stiff and he partially drags it. Speech scanning, slight nystagmus and intentional tremor. Sensory areas normal. Mild senile dementia as indicated by childishness and irritability. Complained of neuralgia and sleeplessness. I prescribed codeine, KI, and local applications for the neuralgia, which soon disappeared and has not returned, and veronal for the sleeplessness, but with no results. I then prescribed small doses of chloral and potassium bromide. His insomnia, however, instead of improving, grew worse and seemed to be worse after taking the medicine than before. I increased the doses gradually until he was taking 40 grains of the chloral and sixty grains of the bromide at a dose. This only made him worse. I then added hyoscine hydrobromate to the prescription, increasing it until he was taking grs. 1/20 at a dose, but with no results. I then added morphine sulph. to the hyoscine, increasing up to

grains 1 of the morphine and grs. 1/20 of the hyoscine, but no sleep and increasing restlessness. Morphine grs. 1/2, hyoscine grs. 1/50 and atropine grs. 1/75, hypodermically gave no better results and finally in despair I gave him, one month ago, morphine grs. 3/4, hyoscine grs. 1/20 and atropine grs. 1/25, hypodermically. Almost immediately he fell into such a deep sleep that I thought he might not awaken and so told the family. Before giving it to him I had explained to his wife that this was an enormous dose for one so old, that bad results might follow, but gave my reasons for so doing, to which she gave her consent. Four days before this he had been unable to pass urine and catheterization had been resorted to and continued up to that night. He slept heavily from 11 p. m. until 8 a. m., when he awakened unusually clear mentally and passed urine normally. That night, however, he again became unmanageable, so I repeated the above dose. He slept "beautifully" all night, awakened much refreshed and has been better mentally and nervously, now one month, than for a year past, passing bowel contents and urine naturally and normally and with no repetition of the medicine. His left testicle, however, has been growing worse and, my suspicions becoming aroused, and questioning I learned that for a year past he has been incapable of orgasm but that his sexual desire seemed all the more increased on that account; that that in fact was his worst symptom and that on that point he was unmanageable. As they are too poor to employ an attendant for him and his wife refuses consent to have him removed to the state or county hospital this is a most perplexing complication to handle. There is a suspicion of malignancy of the left testicle in my mind but there is also a question of the effect of his extreme erotism upon it. Judging from the character of his pulse he may live several years yet.

Good, in the fifth volume of his *Study of Medicine*, published in 1826, refers to a somewhat similar case reported by Norris and published in the first volume of the *Transactions of the Medical Society of London*. In this case the erotism was caused by a "tumour" in the neighborhood of the prostate gland and was "cured when this had been brought to a head and incised."

SURGICAL SECTION.

At the meeting of the Surgical Section, held April 27, Dr. W. H. Morley read for Dr. W. P. Manton the latter's paper on "The Relation of

Weight of the Placenta to the Weight of the Unborn Child." Pointing out the function of the placenta in elaborating food material from the maternal blood, Dr. Manton suggests that the name "antenatal breast" is as applicable to the placenta as the older term "fetal lung."

Granting that the development of the placenta, the extent of its functioning cell surface, and the activity of the chemical change all affect the development of the fetus, a study of the placenta and the new-born child still shows a close relationship between their weights.

In this investigation Manton studied the records of four hundred cases at the Woman's Hospital. The average weight of the child was seven pounds three ounces, that of the placenta one pound three ounces—a ratio of six to one. With one exception the placental weight gradually increases with that of the neonatus. This exception obtains in the case of children weighing from four to five pounds, where the placenta weighs less than in the case of a three or four-pound baby.

In primiparous women both the placenta and child are smaller than in multiparous women.

Conclusions—As a rule the development of the placenta goes forward with that of the child, and its size may be taken ordinarily as an index of the weight development of the latter. There may be individual variations, but the normal ratio between child and placenta is six to one.

Dr. C. H. Judd then presented a paper entitled "An Argument for the Routine Practice of Pelvimetry by the General Practitioner." This paper will appear in an early issue of *The Journal*.

Election of officers for the next year resulted in the choice of Dr. G. E. Potter as chairman and Dr. A. D. McAlpine as secretary.

Dr. B. R. Shurly reported a case of fibroma of the left vocal cord in a man of 22 and exhibited the specimen. C. E. SIMPSON, Sec'y.

At the annual election, held on May 18, the following officers were elected: President, Dr. W. P. Manton; vice-president, Dr. A. H. Bigg; secretary-treasurer, Dr. G. H. McFall; directors, Drs. F. B. Tibbals, J. H. Carstens, J. N. Bell, P. M. Hickey, A. P. Biddle. Drs. H. W. Longyear and W. F. Metcalf were re-elected as directors of the Defense League.

News

The Annual Clinic of the Alumni Association of the Detroit College of Medicine was held from May 20 to 28 inclusive. The attendance was large, the first day bringing a registration of 160. Clinics, lectures, and demonstrations were given daily by members of the teaching force of the Medical School, while in addition there were several visiting men who gave clinics. On the 20th, J. B. Deaver, of Philadelphia, gave an operative clinic in abdominal surgery at Harper Hospital at 11 a. m. and an address in the evening at the Art Museum on the "Scope and Limitations of Gastric Surgery;" on the 22nd, Max Einhorn, of New York, gave a clinic on diseases of the stomach at St. Mary's Hospital; on the same day, in the afternoon, the association was entertained at the Eastern Michigan Asylum, Pontiac, by Dr. E. A. Christian, who gave a clinic in differential diagnosis of insanities, and a luncheon afterwards. On the 23rd, Prof. A. Martin, of Berlin, the world-famous gynecologist, gave a clinic at Harper, and was guest of honor at a luncheon in Harmonie Hall; H. A. Hare, of Philadelphia, gave a general medical clinic at Harper Hospital; on the 25th Frank Billings, of Chicago, conducted a clinic on kidney diseases at St. Mary's, and in the evening spoke at the Art Museum, under the auspices of the Wayne County Medical Society; on the 26th J. Zeisler, of Chicago, demonstrated diseases of the skin at St. Mary's, and in the afternoon Dr. Angus McLean entertained the association by a boat ride and a dinner at the Star Island House, the Flats; on the 27th George W. Crile, of Cleveland, spoke at Harper on the "Hemolytic Test in Its Relationship to Malignant Growths"; on the 28th Robert H. Babcock, of Chicago, gave a clinic on diseases of the heart and lungs, at Harper. On that afternoon a luncheon and the annual meeting of the Alumni Association were held at Harmonie Hall, while the Commencement exercises and banquet of the graduating class were held in the evening.

Dr. T. S. Langford, of Jackson, is spending a year studying in Europe. At present he is in Killian's clinic at Freiburg, Germany.

Dr. B. H. McMullen, of Cadillac, has been appointed division surgeon of the Ann Arbor Railway.

Small pox has been reported in Sciota town-

ship, in Grawn, Casco, Glenn, Ganges, and Condis. A considerable epidemic of measles has prevailed in Watervliet.

Health Commissioner Dr. W. A. Evans, of Chicago, at the annual meeting Tuesday, May 19, of the Detroit Society for the Study and Prevention of Tuberculosis, gave a popular address on the prevention of the disease. President S. T. Douglass made the annual report and said that a visiting nurse would be employed by the society to co-operate with the board of health. Members of the board of directors were elected as follows: S. T. Douglas, Dr. B. R. Shurly, Dr. H. J. Hartz, Dr. E. S. Sherrill, Dr. C. G. Jennings, Mrs. Philip H. McMillan, Miss Clara E. Dyar, Mrs. William A. McGraw, Miss Gertrude Russel.

Dr. V. C. Vaughan, of Ann Arbor, was elected president of the American Association of Physicians at the annual meeting, held at Washington, May 12th.

There has recently been an epidemic of typhoid at St. Clair.

Dr. W. E. Chapman, of Cheboygan, has been appointed assistant surgeon of the Michigan National Guard.

Dr. O. E. Fischer, of Detroit, a member of the Detroit Mycological Club, gave a lecture on "Michigan Mushrooms and Toadstools" before the Nature Club of Battle Creek, on May 7. Dr. Fischer has over a hundred stereopticon slides, which he has prepared from photographs of the various fungi.

The Board of Poor and Health Commissioners of Kalamazoo have elected as their president Dr. O. H. Clark. Dr. D. J. Levy is health officer, Dr. Ralph H. Balch is a member of the board for three years, and Dr. J. W. Bosman for four years.

Dr. J. J. Mulheron, of Detroit, has retired from practice, to live on his farm in Greenfield.

A New York city justice recently rendered a decision that osteopaths are practitioners of medicine, and as such should receive registration at the Board of Health office and sign death certificates.

Harper Hospital in Detroit was recently the recipient of a \$10,000 legacy from Harriet Stringham, deceased April 28.

Dr. C. B. G. de Nancrede, of Ann Arbor, is the newly elected president of the American Surgical Association.

Dr. Allen D. McLean, U. S. N., recently in charge of the recruiting office in Detroit, has gone to Portsmouth, N. H., to serve in the naval hospital.

For the treatment of patients having throat and chest troubles, and who are not able to afford the services of a paid specialist, the Detroit Throat and Chest Free Dispensary has filed articles of association in the Wayne County clerk's office. The association already has a house on Adams avenue, near Hastings street, which will be used for the dispensary. It will have accommodations for a few persons who may need to remain there, but most of the patients attended will be transients.

Dr. E. L. Shurly will be at the head of the institution. The other incorporators are: Charles H. Hodges, George H. Barbour, Jeremiah Dwyer, Frank J. Hecker, H. D. Shelden, J. L. Hudson and S. Y. Seyburn.

Dr. and Mrs. Johann M. Flintermann of Detroit have left for a three month's trip to Europe. Dr. Flintermann will visit the principal hospitals where nervous disorders are treated.

A complimentary luncheon to Dr. August Martin of Berlin was given on Saturday, May 23, at the Harmonie Club in Detroit, under the auspices of the Wayne County Medical Society. Dr. Martin visiting this country for the especial purpose of attending the meetings of the American Gynecological Society and the American Medical Association.

Marriages

Dr. Merritt Galbreath of South Haven to Miss Bessie Moore of Kalamazoo, April 6.

Dr. F. P. Camelon of Detroit to Miss Edith Leroy Hartwell, in March.

Dr. John Blake, Detroit, to Miss Bertha V. Byrne of Belle River, Ont., April 29.

Dr. H. V. Vaughan of Morenci, to Miss Ethel Shaw of Cleveland, April 1st.

Deaths

H. B. Peterson, M. D., of Owosso, died at his home recently, aged 63.

De Witt Spalsbury, M. D., of Ypsilanti, died in April at his home.

J. S. Tabor, M. D., of Cassopolis, died April 29 of morphine poisoning, aged 33.

A. J. Pettis, M. D., of West Branch, died on May 18 at Harper Hospital in Detroit, following an operation for hip trouble, aged 38.

Dr. G. A. Curriden, a resident of Detroit, and a traveling salesman for a New York proprietary house, died suddenly in the Herkimer Hotel in Grand Rapids, April 15, aged 40.

Stephen H. Clisbe, M. D., a practitioner for 38 years in Coldwater, died of diabetes April 7, aged 65.

Charles W. Ellis, M. D., a prominent colored physician, died on April 18 of pneumonia, at his home in Saginaw, aged 46.

Arthur G. Oven, M. D., of Petoskey, died from perforation of the duodenum, April 18. He had practised medicine for 25 years, and was 56 years of age.

Godfrey Lorenzo, M. D., a pioneer resident and physician of Monroe, died suddenly of heart failure at his home, April 22, aged 79.

E. B. Harris, M. D., for 30 years a practitioner in New Haven, died in Kansas City, Mo., April 22, aged 70.

Alexander Striemer, M. D., died suddenly from heart disease, at his home in Hillsdale, April 25, aged 58.

James N. Buckham, M. D., a well-known practitioner of Flint, died in Rochester, Minn., following a surgical operation, April 18, aged 50.

Henry Bennett Gammon, M. D., of Hastings, died at the West Side Hospital in Chicago, April 21, aged 39.

John B. Laing, M. D., died at his home in Otisville, April 6, from nephritis, aged 62.

surprised to learn his age. He came to Lapeer thirty-five years ago and was one of the best loved physicians of the country.

Dr. McColl was born in Ontario in 1844, and his mother, now ninety-five years of age, survives him. His medical education was obtained at the University of Michigan and Bellevue Hospital Medical College, where he graduated in 1871. Dr. McColl also spent two years in Europe, where he took special work in some of the prominent medical institutions. In 1897, he took a trip around the world, and his office was filled with relics obtained from Alaska, China, India, Palestine, and other foreign countries.

He was the first president of the Lapeer County Medical Society, was president of the Michigan State Medical in 1893, and had several times been president of the Northeastern Medical Society. He had several terms as member of the school board of Lapeer, and was moderator of the Presbytery.

Hugh McColl was a sturdy man, but a lovable man. Three years ago, the members of the Lapeer County Medical and Northeastern Medical Societies presented him with a loving cup.

Repeated attacks of rheumatism left his heart with a mitral regurgitation, but with care he was able to do an immense amount of work. His knowledge was encyclopedic and was ever ready at his command. About four years ago his health began to fail and two years ago he gave up practice and went home to his mother at Hubrey, Ontario. After a stroke of apoplexy, he died on Easter Sunday. The remains were laid to rest at St. Thomas, in the old family burial ground.

H. E. RANDALL.

Obituary

HUGH McCOLL, M. D.
1844-1908.

Hugh McColl is gone. He was a familiar figure at our state and national medical meetings. In twenty-five years, he told me, he had not missed a meeting. He looked beyond his years, being only sixty when he died, and many were

Correspondence.

Chicago, May 1, 1908.

To the Editor:—

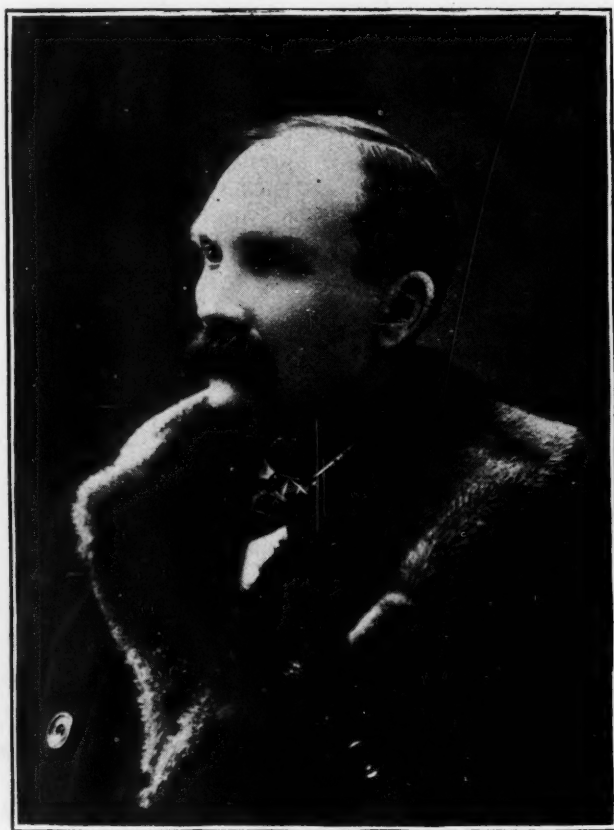
I have just read your editorial in the April number of the Journal of the Michigan State Medical Society, and it is so palpably unfair that I cannot help making answer, because I believe that you have written simply from your reading of the J. A. M. A. and not from your own knowledge of either the professional or financial standing of the parties attacked.

It would appear that you charge Dr. Abbott

with bringing or attempting to bring into life, in the United States, a new medical sect—nothing is farther from the truth. Prof. A. Burggraeve, of Ghent in Belgium, was the first to preach, not a new sect, but accuracy in therapeutics, and the writer first made the attempt of introducing this idea into this country, but holding to strictly scientific means his propaganda fell flat and at a cost to him of over \$20,000. Dr. Abbott was one

other "form of aberration" in the substitution of an active principle of known physiologic action, for an uncertain and variable drug or galenic preparation of same.

You say the "humbuggery of alkalometry has been exposed in its relation to some of the Abbott drugs" and you cite Calcidin—now why pick out Abbott? There are at least a dozen manufacturers who are making iodized calcium and brown



Hugh McColl, M. D.
1844 - 1908

of my first converts and my failure to supply him with what he wanted in his practice led him to manufacture for himself, and being a man of eminent ability as a promoter he recognized the fact that the majority of physicians did not want strictly scientific medicines and he gave them what they wanted, while at the same time advocating the teachings of Burggraeve, and I want to say to you that there is no "empiricism" or any

iodide of lime, but they, in the effort to kill off Abbott, are forgotten; now the only difference that I can see is that Abbott has, in order that his customer should be protected in getting just what he wanted, protected his product with the trade mark "Calcidin"; this does not in any manner prevent anyone from making iodized calcium, but it does prohibit the use of the name "Calcidin." Next you say that Cactin is one of the

frauds perpetrated by Abbott—now in all fairness, doctor, have you ever used Cactin, or have you at any time ever seen a sphygmographic tracing of the effects of this drug?—I am in a position to speak positively upon this article, both from long personal use as well as in my practice, and I am in a position to contradict flatly Prof. Mathews' findings with the drug—his tests being made upon animals and without the sphygmograph, while my observations have been made upon the human subject and with the sphygmograph as a guide. To prove my assertion I am prepared to send to you tracings of my own pulse in repose and tracings taken 30 minutes later after having taken in the interim 1/67 grain of Cactin, the demonstration fully showing that something has had a marked effect on the heart's action which changed the character of the tracing, and as nothing but the Cactin had been taken the credit must be given to that drug.

But the diatribe against this and other products of the Abbott Alkaloidal Co. is in keeping with the motto adopted by the J. A. M. A., "anything to kill Abbott," and the funny part of it is that it is not the doctors that want Abbott killed—it is the big manufacturers who are anxious for the killing, and this causes a rather peculiar and ugly thought to arise in the minds of the many—why should the J. A. M. A. play into the hands of these overgrown pharmaceutical houses by attacking Abbott? Again why? And then some more.

You say the chief officers of this commercial house are men who practice very little, if any, medicine actively. I want to disabuse your mind of this fallacy. Dr. Abbott, Dr. Waugh and myself are registered physicians in Illinois, and I am ready to demonstrate that our income from active practice at least equals and probably exceeds your own, while Dr. Burdick is fully occupied with editorial work; and do you consider our position any worse than that of Professor Hare, who is paid a good big salary by Parke, Davis & Co. for his services as editor of the *Therapeutic Gazette*—truly a house organ started for the purpose of booming Cascara Sagrada, Yerba Santa, Yerba Rheums, and many other specialties introduced by that firm, and further, I do not believe from my own personal connection with Parke, Davis & Co., that a medical convention is held in which some paid representative of this firm is not present; not only is this a fact, but there are also among the teachers of materia medica and therapeutics a number of paid em-

ployees of this firm.

Next you talk of something which of necessity you know nothing, to-wit, this so-called bond issue. It is not beyond business ethics that a house may issue debentures of many kinds—some mortgage notes, some call loans, and some long-time interest bearing notes; anything wrong in Abbott doing what others are doing? The International Harvester Co. has out over \$5,000,000 in bonds among their customers, the farmers, and covered by what? Promise to pay, that is all, while Abbott has much more than the value of all the bonds outstanding in real property. Now I hold a goodly wad of these bonds which I have paid for in good hard coin at par, and I only wish that I had the money to increase the size of the bunch, because I know that after the stock dividends are paid I have received and am going to receive a bunch of interest and co-operative division of profit such as is not to be had from any other investment that I have made.

And then you talk about nostrums. Why Doctor! Abbott does not own a secret remedy nor to my knowledge did he ever present one to the medical profession—while I should think that your nostrils would be full of that kind of stench arising from your home city.

The whole trouble is, doctor, that the very instant that any man in any profession or business succeeds sufficiently to push his head above his fellows, some envious chap shies either a rotten egg or decayed vegetable at the shining mark, and when this successful man becomes heavy enough to pinch some other heavy fellow's toes, the cry is "down him." In my forty years of business experience I have seen this exemplified in many cases and in many places, even in your own city.

Excuse this long harangue, but this article looked to me so preposterous that I could not help but make answer, and also to let you know that there is at least one man who is willing to be "defrauded" by Abbott and his bonds, and who swears by his honesty of purpose in the fight he is making for a rational and accurate therapy.

Fraternally yours,

W. T. THACKERAY, M. D.,
Jefferson College Class 1865.

Bay City.

Bay City, May 1, 1908.

To the Editor:—

I am sending you under separate cover a preparation which, as you will see, corresponds very

closely to the various so-called "clay dressings" which are on the market selling at from about 30 to 60 cents per pound.

This preparation was brought to the attention of the members of the Bay County Society by Dr. J. W. Hauxhurst at the last meeting. It is composed of the ordinary "whiting" (which can be bought for a few cents per pound at any hardware dealer) mixed with enough glycerin to make the desired consistency and scented with a little volatile oil.

This makes a smooth paste; is very cheap; can be prepared in any quantity and at any time in

the office; and in making it up any medicament may be incorporated in it by mixing with the glycerin, as lead and opium, methyl salicylat, ichthyol, etc. On account of its cheapness and ease of preparation, it can be changed as frequently as desired when using.

Thinking the above information might prove of some use to the members of the profession throughout the state, I was instructed to send this to the state journal.

Yours very truly,

R. C. PERKINS, Sec'y.

PROGRAM

OF THE

43rd Annual Meeting

OF THE

Michigan State Medical Society

Manistee, June 24-25th 1908

THE COUNCIL.

Chairman—C. B. Burr, Flint.
 Vice-Chairman—W. T. Dodge, Big Rapids.
 Secretary—W. H. Haughey, Battle Creek.

Tuesday, June 23rd, 3 P. M.

Wednesday, June 24th, 2 P. M.

Thursday, June 25th, 2 P. M.

for each major fraction thereof; but each County Society holding a charter from this Society, which has made its annual report as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

HOUSE OF DELEGATES.

ELKS' TEMPLE.

President—HERMAN OSTRANDER, Kalamazoo.
 Secretary—B. R. SCHENCK, Detroit.

BY-LAWS—CHAPTER IV, Section 1. Each Component County Society shall be entitled to send to the House of Delegates each year one delegate and one alternate for every 50 members, and one

First Session, Tuesday, June 23rd.

8 P. M.

1. Call to order by the President.
2. Roll Call.
3. Reading of Minutes of the last Annual Meeting.
4. Report of the Council.
 W. T. DODGE, Big Rapids, Vice-Chairman.
5. Report of Committee on Legislation and Public Policy.
 W. H. SAWYER, Hillsdale, Chairman.

6. Report of National Legislative Council, A. M. A.

FLEMMING CARROW, Detroit, Michigan Member.

7. Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.

WALTER R. PARKER, Detroit, Chairman.

8. Miscellaneous Business.

(a) Election of Committee on Nominations to nominate:

1st, 2nd, 3rd and 4th Vice-Pres.

Four Representatives in House of Delegates,

A. M. A. 2 for 1 year and 2 for 2 years; 2 alternates, for 2 years.

To fix place of meeting for 1909.

(By-Laws, Chap. VI., Sec. 2 (as amended June 12, 1903.))

The House of Delegates shall elect, annually, at its first meeting, a Nominating Committee of Five from the House of Delegates, no two of whom shall be from the same Councilor District.

(b) Appointment of other Working Committees.

(c) Proposal of Amendments to the Constitution.

Proposal of Amendments to the By-Laws.

Other Miscellaneous Business.

Adjournment.

Second Session, Wednesday, June 24th.

9 A. M.

1. Reading of the Minutes of the Previous Session.
2. Unfinished Business.
 - (a) Amendments to By-Laws.
3. Report of the Committee on the Study and Prevention of Tuberculosis.

W. E. COATES, Onekama, Chairman.
4. Report of the Committee on the Patent Medicine Evil.

G. A. HAFFORD, Albion, Chairman.

5. Miscellaneous Business.

Adjournment to General Meeting.

Third Session, Thursday, June 25th.

8 A. M.

1. Reading of the Minutes of the Previous Session.
2. Report of Committee on Nominations.
3. Unfinished Business.
4. Report of Committee on Vital Statistics.

H. B. BAKER, Lansing, Chairman.
5. Report of Committee on Venereal Prophylaxis.

A. P. BIDDLE, Detroit, Chairman.
6. Miscellaneous Business.

Adjournment to General Meeting.

GENERAL MEETING.

ELKS' TEMPLE.

President—HERMAN OSTRANDER, Kalamazoo.
State Secretary—B. R. SCHENCK, Detroit.

First Day, Wednesday, June 24th.

10 A. M.

1. Call to Order.
2. Prayer.

REV. J. J. STALEY.
3. A Word of Welcome.

HON. AUGUST FIELD, Mayor of Manistee.
4. Address of Welcome on behalf of the Medical Profession.

DR. J. A. CHRISTENSON, President Manistee County Medical Society.
5. Report from the House of Delegates.

B. R. SCHENCK, Detroit, State Secretary.
6. Address of the President.

HERMAN OSTRANDER, Kalamazoo.
7. Miscellaneous Business.
8. Nomination of President for 1908-1909.

Adjournment.

ENTERTAINMENT.

Wednesday afternoon, from 2 until 4 o'clock, the ladies of the Lakeside Club, assisted by the wives of the members of the Manistee County Medical Society, will receive the visiting ladies at the Knights of Pythias Hall.

At 4 o'clock the sections will adjourn and all members and visiting ladies will be the guests of the Manistee County Society at a boat ride, entertainment and barbecue.

Second Day, Thursday, June 25th.

11 A. M.

1. Unfinished Business.
2. Report from the House of Delegates.
3. Address by the guest of honor.

DR. J. C. BLOODGOOD, Associate Professor
of Surgery, Johns Hopkins University,
Baltimore.

Subject—

4. Miscellaneous Business.
5. Announcement by the Committee on Nominations on the Result of the Ballot for President.
6. Introduction of the President-elect.

Adjournment sine die.

SECTION ON GENERAL MEDICINE.

ELKS' TEMPLE.

Chairman—D. M. COWIE, Ann Arbor.

Secretary—G. F. INCH, Kalamazoo.

On account of the length of the program, and in order to give every one an opportunity, the fifteen minute rule will be enforced.

The Secretary of the Section will collect all papers as soon as read.

Discussions are limited to five minutes.

First Session, Wednesday, June 24th.

1:30 P. M.

1. The Diagnosis of Incipient Pulmonary Tuberculosis.

COLLINS H. JOHNSTON, M. D., Grand Rapids.

Eighty per cent of incipient cases of pulmonary tuberculosis are curable. Must not depend upon finding bacilli in sputum to make diagnosis. May have incipient disease without cough, expectoration, fever or tubercle bacilli in the sputum. An incipient case is one with slight infiltration limited to apex or small part of one lobe; no tubercular complications, slight or no constitutional symptoms, elevation of temperature, acceleration of pulse, expectoration. Diagnosis requires painstaking and repeated examinations. X-Rays sometimes of value in hands of an expert but with untrained observers frequently lead to erroneous conclusions, hypodermic use of tuberculin of great value in making an early diagnosis. Absence of reaction after use of 10 milligrams in early cases warrants the belief that no tuberculosis is present. Value of the Calmette test not yet positively determined, but all observers agree that it is one of the most useful aids to diagnosis in doubtful cases. The author believes it is less reliable than the hypodermic test. Of 20 cases which reacted to the latter test, six failed to react to the ocular test.

Discussion opened by H. J. Hartz, M. D., Detroit.

2. Remarks on Apoplexy.

Hugh T. Patrick, M. D., Chicago.

A false impression as to the more frequent causes and the nature of apoplexy. A false impression as to the prevailing pathology and causes of apoplexy is quite general. Taking all cases, thrombosis is much more frequent than hemorrhage. Points of distinction and differential diagnosis. Treatment during and subsequent to attack.

Discussion opened by David Inglis, M. D., Detroit.

3. Poisonous Proteids.

VICTOR C. VAUGHAN, M. D., Ann Arbor.

The author of this paper will attempt to show that the essential part of all bacterial cells consists of proteid material, and that every true proteid contains a poison. Will also attempt to show that there is more or less danger in injecting whole proteids into the human body, whether these be bacterial cells, horse serum, egg-white or other proteid material; also that good effects can be obtained by injecting the non-poisonous part of the proteid material. He proposes that the non-poisonous part of the typhoid bacillus and of the tubercle bacillus be used in the treatment of typhoid fever and tuberculosis.

Discussion opened by James D. Munson, M. D., Traverse City.

4. What Can be Done for Acute Inflammation of the Upper Air Passages.

JOHN V. WHITE, M. D., Detroit.

Introduction—Anatomical consideration. Method of treating acute inflammation of the pharynx and nose. Importance of removal of local infection.

Discussion opened by Edward J. Bernstein, M. D., Kalamazoo.

5. Lymphatic Leukemia.

WILFRID HAUGHEY, M. D., Battle Creek.

General considerations; etiology; diagnosis; prognosis; treatment. Report of a case with blood findings. Illustrated by charts.

Discussion opened by V. C. Vaughan, Jr., M. D., Detroit.

6. The Treatment of Exophthalmic Goitre.

JEANNE SOLIS, M. D., Ann Arbor.

1. Introductory review of the pathological theories of the disease upon which a choice of treatment must be based. 2. A brief review of the various methods of treatment. 3. A special consideration of the indications for and the advantages of the use of the direct electric current in the treatment of exophthalmic goitre. 4. The method of the application of the direct electric current in this disorder. 5. Results of this method of treatment as shown by cases treated.

Discussion opened by Blanche Epler, M. D., Kalamazoo.

Adjournment at 4 P. M. to Boat Ride.

Second Session, Thursday, June 25th.

8:30 A. M.

1. A Practical Method of Estimating and Recording the Opsonic Index.

A. W. CRANE, M. D., Kalamazoo.

The reasons are given why Wright's method will not be used in general medical practice. A method is proposed by which much time is saved and greater accuracy secured. By this quick method, the average number of bacteria per leucocyte and per cent of phagocytes are both obtained, together with a means of making a correction for differences in the density of bacterial suspensions, on each slide. The faults of the present method of stating results are emphasized and another method of recording the Opsonic factors is explained.

Discussion opened by R. E. Walker, M. D., Ann Arbor.

2. Recurrent Vomiting in Children.

HERBERT M. RICH, M. D., Detroit.

Definition. Pathology. Association with Acetonemia. Symptoms. Prognosis. Illustrative Cases. Treatment. Importance of Recognition.

Discussion opened by Thomas B. Cooley, M. D. Detroit.

3. Diagnosis of Oesophageal Obstruction.

GEORGE DOCK, M. D., Ann Arbor.

Obscurity of the subjective symptoms; importance of early recognition; interpretation of symptoms; confirmation by instrumental examination; methods of the latter, soft tube, probe, oesophagoscope, diagnosis of location of obstruction, of nature of lesion, of secondary or complicating conditions.

Discussion opened by B. R. Shurly, M. D., Detroit.

4. Feeding and Bathing in Typhoid Fever.

CHARLES G. JENNINGS, M. D., Detroit.

Discussion opened by A. H. Rockwell, M. D., Kalamazoo.

5. Treatment of Chronic Diseases of the Heart by Carbonated Mineral Baths and Auxiliary Exercises.

WILLIAM L. WILSON, M. D., St. Joseph.

1. History of carbonic acid baths. Nauheim treatment; Franzensbad baths; artificial Nauheim baths. 2. The writer's method of giving carbonated baths. 3. Physiological action (a) on the heart and blood-vessels, (b) on the blood, (c) on the nervous system (d) on tissue metabolism. 4. Exercise treatment, (a) respiratory exercises, (b) massage, (c) resistance exercises. 5. Dietary rules. 6. Indications for treatment. 7. Contra-indications. 8. Prognosis. 9. Conclusions.

Discussion opened by George Dock, M. D., Ann Arbor.

Adjournment at 10:45 A. M. to General Session.

Third Session, Thursday, June 25th.

1:30 P. M.

Election of Chairman for 1909.

1. Distinction between Hysteria, Hypochondria, Neurasthenia and Simulation.

CARL D. CAMP, M. D., Ann Arbor.

The distinctive features of these four conditions are considered from a clinical, pathological and therapeutic standpoint.

Discussion opened by Charles W. Hitchcock, M. D., Detroit.

2. Diagnosis and Treatment of Pleurisy with Effusion.

FRANK SMITHIES, M. D., Ann Arbor.

Cases frequently arise presenting difficulties with respect to both diagnosis and treatment. Diagnosis depends upon the correct interpretation of carefully observed physical signs. Analysis of fifty cases; value of the cyrtometer, saddle tape and observation of the movements of the diaphragm. The percussion findings, movable dullness; the paravertebral triangle of dullness (Grococo's sign). The data from auscultation. Radiography. Exploratory puncture.

Treatment: Each case a distinct problem. Often depends on features in diagnosis. Value of early aspiration. Dangers of aspiration. Quantity of fluid to be removed. The class of cases which respond to medical treatment. The use of purgatives; of salicylates, etc. The Barr method. Means for restoring function to lung. Specific treatment: Tuberculin, vaccines.

Discussion opened by William M. Donald, M. D., Detroit.

3. Hypertrophic Stenosis of the Pylorus.

WILLIAM M. DONALD, M. D., Detroit.

Hypertrophic stenosis of the pylorus in infants. Simple spasm of the pylorus in infants. First description of this disease by English clinicians two or three years ago. Varieties, symptoms of the disease, causation, prognosis, treatment, medical and surgical, report of four cases in one family.

Discussion opened by I. L. Polozker, M. D., Detroit.

4. Diet and Digestion.

F. J. GRONER, M. D., Grand Rapids.

Dietetics as prophylactic against and as a partial cure for disease has been neglected in the curriculum of our medical colleges and in our medical literature. Many of our ills come from improper and badly cooked foods eaten at improper times and in an improper way. Gastro-intestinal catarrh causes auto infection, this in turn accounts for many diseases. From tables recommended exact portions of food principles can be prescribed, the same as food for infants or exact doses of medicine.

Discussion opened by William Fuller, M. D., Grand Rapids.

5. What the Druggist Does for the Doctor.

MINTA PROCTOR KEMP, M. D., Detroit.

Recent criticism of the lay press. Exploiting new remedies. Products of the manufacturing chemist, necessary division of labor, cost of production. Proprietary remedies imitated in U. S. P. Purpose of U. S. P. Remedies brought out by druggists. Druggist's method of testing drugs. Present laboratory work, bacterial vaccines, etc.

Discussion opened by Charles T. McClintock, M. D., Detroit.

SECTION ON SURGERY, OPHTHALMOLOGY AND OTOTOLOGY.

ELKS' TEMPLE.

Chairman—H. B. GARNER, Traverse City.
Secretary—J. E. GLEASON, Detroit.

On account of the length of the program, and in order to give every one an opportunity, the fifteen-minute rule will be enforced. Discussions are limited to five minutes.

The Secretary of the Section will collect all papers as soon as read.

First Session, Wednesday, June 24th.

1. THE COUNTRY SURGEON. Chairman's Opening Address.

H. B. GARNER, M. D., Traverse City.

2. DRAINAGE AFTER CHOLECYSTOTOMY.

J. J. REYCRAFT, Petoskey.

The paper will present the indications for drainage in operations upon the gall bladder and ducts. In the author's opinion, many cases now treated by insertion of drainage should be closed at the time of operation.

3. ACUTE PERITONITIS.

W. F. METCALF, M. D., Detroit.

(1) Etiology. (2) Pathology, gross and microscopic features. (3) Differential Diagnosis. (4) Treatment, general and surgical.

4. APPENDICOSTOMY.

J. A. MACMILLAN, M. D., Detroit.

(1) History of the operation. (2) Indications, (a) appendicostomy compared with other operations having same indications, (b) used for mucomembraneous colitis, amoebic dysentery, chronic ulcerative colitis. (3) Technique. (4) Method of obliterating the opening.

5. CHLOROFORM ANAESTHESIA.

R. M. GUBBINS, M. D., Ceresco.

Knowledge of the drug and of the patient; method of administration; method in vogue for determining the degree of anaesthesia; apparatus used defective; new apparatus; dangers, and how to avoid them. Need of investigation of different degrees of anaesthesia on the nervous system, blood, blood pressure, etc. Comfort and safety of the patient, also comfort of the anaesthetist.

6. ACUTE TOXAEMIA FOLLOWING CHLOROFORM ANAESTHESIA.

F. W. HEYSETT, M. D., Freesoil.

Besides toxic defects during anaesthesia, and its action in producing pneumonia and nephritis, chloroform causes fatty degeneration of the liver cells; symptoms of toxæmia; cause of symptoms; predisposing conditions; exciting cause. Report of case of delayed chloroform toxæmia. Conclusions.

7. SOMNOFORM, THE NEW ANAESTHETIC.

G. C. HAFFORD, M. D., Albion.

Somnoform among the new drugs which are worthy; nearly a century since the present anaesthetics were discovered; advancement along this line not as rapid as along others; history; composition compared with other anaesthetics; differences from ethyl chloride; death statistics; experiments showing its action; method of use; need of experience before condemning; record of cases.

Papers 5, 6 and 7 will be discussed together.

Adjournment at 4 P. M. to Boat Ride.

Second Session, Thursday, June 25th.

8:30 A. M.

1. Lantern Slide Demonstration of Some Newer Anatomical and Pathological Conditions Which Have Revolutionized Rhinology.

E. J. BERNSTEIN, M. D., Kalamazoo.

Rhinology of today differs from rhinology of fifteen years ago, as does treatment of diphtheria in like periods. This is due entirely to closer study of embryology and anatomy, both normal and pathological. Relation of adenoids to development of the face. Their relation to deformities of the mouth and septum. Septal deflections due to adenoids more than to trauma. Relation of lymphatic system of upper respiratory tract to meningeal. Study of abnormalities of accessory sinuses. In majority of exanthemata sinuses are acutely involved. 95 per cent recover spontaneously. Mainly where some abnormality exists that nature cannot take care of infection. Maxillary antrum trouble due to carious teeth in minority; lantern slide demonstrations of such cases. Relation of headache, blindness, toxæmia to nasal troubles; inutilty of old routine spray method in treating these conditions.

2. A Preliminary Report Upon the Use of the Tubercle Residue of V. C. Vaughan in Surgical Tuberculosis.

J. W. VAUGHAN, M. D., Detroit.

The application of bacterial products. The preparation of the non-toxic residue. Report of cases. Conclusions.

3. Report of a Case of Successful Removal of an Esophageal Diverticulum.

H. O. WALKER, M. D., Detroit.

4. Nerve Involvement Following Fractures.

C. S. OAKMAN, M. D., Detroit.

Frequency and mode of occurrence. Immediate and secondary involvement. Symptoms, signs and methods of diagnosis. Prognosis, immediate and remote. Treatment, prophylactic, palliative, surgical and non-surgical.

5. A Bloodless Operation for Hemorrhoids.

L. J. HIRSCHMAN, M. D., Detroit.

A brief description of a simplified operation for internal hemorrhoids, which is applicable either under local or general anaesthesia. The hemorrhage incident to the ordinary rectal operations is prevented, which makes this method especially suited for patients suffering from anaemia, tuberculosis, or other wasting diseases.

Adjournment at 10:45 A. M. to General Session.

Third Session, Thursday, June 25th.

1:30 P. M.

Election of Chairman for 1909.**1. Cyclodialysis Versus Iridodialysis.**

P. J. LIVINGSTONE, M. D., Detroit.

Review of etiology and pathology of glaucoma. Reference to results of iridectomy and iridodialysis, for relief of intraocular tension. Reference to cyclodialysis as a simplified operation for relief of intraocular tension. Report of cases.

2. Resections of Intestines.

MAX BALLIN, M. D., Detroit.

Resections in cases of (a) strangulated hernia, (b) malformations (Meckel's Diverticulum, persisting omphalo-mesenteric duct), (c) stricture or complete obstruction of the intestines, caused by ulcers, adhesions, volvulus, intussusceptions, (d) tumors.

3. Personal Experience With Prostatitis.

F. W. ROBBINS, M. D., Detroit.

The great majority of cases are symptomless. A certain small proportions show nervous symptoms very much exaggerated. When to suspect prostatitis, and how to prove it. Should one be optimistic or pessimistic regarding prognosis. Results of treatment depend upon attitude of surgeon to previous question. A plea for judicious conservatism in prognosis and patient well directed treatment.

4. The Neisser or Gonococcus Vaccine in Affections of the Genito-Urinary Tract, the Result of Gonococcus Infection.

N. E. ARONSTAM, M. D., Detroit.

Usefulness of vaccine in acute stages. In chronic conditions not so reliable, because of mixed infection. Should be combined in these cases with staphylococcal vaccines. Importance as a diagnostic agent in latent gonorrhea; action of vaccine in these cases. Statistics of cases. Future possibilities of vaccines in general and of Neisser in particular. Conclusions.

5. Foreign Body Cystitis.

G. E. POTTER, M. D., Detroit.

Etiology. Report of a case of cystitis of four years' duration in a 12-year-old child. Large phosphate calculus with hair-pin for a nucleus removed from the bladder. Symptomatology; diagnosis. The importance of a thorough physical and instrumental examination, including the use of the cystoscope and roentgen ray. Treatment.

SECTION ON GYNECOLOGY AND OBSTETRICS.

ELKS' TEMPLE.

Chairman—A. N. COLLINS, Detroit.

Secretary—C. G. PARNALL, Jackson.

On account of the length of the program and in order to give every one an opportunity, the fifteen-minute rule will be enforced.

The Secretary of the Session will collect all papers as soon as read.

First Session, Wednesday, June 24th.

1:30 P. M.

1. Conservatism in the Surgery of the Uterine Adnexa for the Preservation of the Possibility of Pregnancy.

G. VAN AMBER BROWN, Detroit.

Abstract. Histological anatomy. Physiological phenomena of the pelvic current and its relation to the mode of pregnancy. Internal and external migration of the ovum. Surgical technic. Influence of posture. Case report.

2. Hydramnios: Its Etiology and Significance.

J. E. DAVIS, Detroit.

3. Dietetics in Gynecology.

J. H. KELLOGG, Battle Creek.

The aim of this paper is to show that not a few of the ailments and distresses of which women complain and for which they seek relief from gynecology are due to a faulty regimen and may be corrected by a proper dietary and restoration of the integrity of the digestive functions. Particular emphasis is laid upon intestinal autointoxication as a factor in producing various functional and organic disorders of the pelvic organs and associated viscera.

4. Report of Cases.

F. B. TIBBALS, Detroit.

*Adjournment at 4 P. M. to Boat Ride.***Second Session, Thursday, June 25th.**

8:30 A. M.

1. Comforts and Minor Necessities Necessary in Confinement Cases.

C. HOLLISTER JUDD, Detroit.

2. Eclampsia.

EDWIN ELLIOTT, Chesaning.

Abstract. Introductory. Etiology. Report of some cases with treatment and results. Conclusions.

3. A Plea for Early Diagnosis in Carcinoma of the Uterus.

J. H. CARSTENS, Detroit.

4. The Advantages of the Cross Incision in Abdominal Surgery.

ROLLAND PARMETER, Detroit.

Adjournment at 10:45 A. M. to General Session.

Third Session, Thursday, June 25th.

1:30 P. M.

Election of Chairman for 1909.

1. A Case of Obstetrics With Sequelae.
W. P. MANTON, Detroit.
2. Typhoid Fever as a Complication of Abdominal Operations, Pregnancy, and Puerperium.
REUBEN PETERSON, Ann Arbor.

Abstract.—The paper is based upon two cases where typhoid fever was present after abdominal section, and one case where the same complication occurred after a normal delivery. Such cases are not common and are especially liable to be mistaken for sepsis. Hence they are notably interesting from the standpoint of differential diagnosis.

Symposium on the Toxemias of Pregnancy.

- (a) The Etiology and Pathology of the Various Toxemias.
W. H. MORLEY, Detroit.
- (b) The Treatment Up to the Time Radical Measures Become Necessary.
H. E. RANDALL, Lapeer.
- (c) Radical Treatment. Methods of Emptying the Uterus. Dangers.

To be announced.

These three papers will be short and will serve to introduce the topic for discussion. It is an important one and everyone is urged to come prepared to make a contribution to the discussion.

MISCELLANEOUS.

Headquarters—Dunham House.

Information and Registration, Elks' Temple. Every member should register on arrival.

All meetings will be held at the Elks' Temple on Central standard time.

Commercial exhibits will be found in the Elks' Temple.

The ballot box for the Presidential election will be found at the registration office. It will close at 11 a. m. Thursday. Only those registered are entitled to vote.

All meetings will be called to order promptly. The program is long. Those who are to read papers should carefully note the time and be present.

On account of the length of the program it is absolutely essential that no paper shall be longer than fifteen minutes. Every one on the program has been sent a personal letter to this effect.

Papers handed in for publication may be any length. Discussions must be limited to five minutes.

Adjournment of the sections must take place promptly at 4 p. m. on Wednesday and 10:45 a. m. on Thursday.

BY-LAWS—CHAPTER III, SECTION 5.

All papers read before the Society shall be its property. Each paper read *shall be deposited immediately with the Secretary*, but the author may also publish the same in any reputable journal not published in this State, provided the printed article bears the statement that it was 'read before the Michigan State Medical Society.'

HOTELS.

<i>Dunham House</i> (Headquarters)...	\$2.00 to \$2.50
<i>Briny Inn</i>	\$2.00 to \$2.50
<i>Northern</i>	\$1.50
<i>Metropolitan</i>	\$1.00 to \$1.50
<i>Marion</i>	\$1.00 to \$1.50
<i>Pearl</i>	\$1.00 to \$1.50
<i>Hermann House</i>	\$1.00 to \$1.50

LOCAL COMMITTEES.**Committee on Arrangements.**

A. A. McLarty	James A. King, Chairman
H. D. Robinson	J. A. Christenson
	G. F. Knowles

Committee on Information and Accommodation.

Dr. J. A. King	Dr. H. D. Robinson
Dr. F. G. Knowles	Dr. A. A. McLarty
	Dr. J. A. Christenson

Committee on Reception at Trains.

Dr. J. A. King	Dr. W. K. Branch
Dr. J. A. Christenson	Dr. J. E. Poutre
Dr. W. H. Steele	Dr. A. S. Payne
Dr. Harlan MacMullen	Dr. J. B. Ewers
Dr. R. F. Foster	Dr. C. A. Norconk

Committee on Entertainment of Visiting Ladies.

The Lake Side Club of Manistee

Committee on Printing.

Dr. Harlan MacMullen	Dr. P. C. Jensen
	Dr. A. S. Payne

Committee on Exhibits.

Dr. L. S. Ramsdell	Dr. J. B. Ewers
	Dr. L. Szadrawski

Committee on Wednesday Evening Entertainment.

Dr. A. S. Payne	Dr. W. K. Branch.
Dr. Emma J. West	Dr. Harlan MacMullen
Dr. L. S. Ramsdell	Dr. A. A. McLarty
Dr. J. A. Christenson	Dr. F. G. Knowles
	Dr. E. S. Ellis

Committee on Reception at Hall.

All the members of the Manistee County Medical Society

COUNTY	DELEGATE	ALTERNATE
Antrim.....	J. C. Gauntlett, Elk Rapids.....	
Barry.....	J. G. McGuffin, Hastings.....	A. I. Laughlin, Woodbury.
Bay.....	A. W. Herrick, Bay City.....	W. W. Williams, Bay City.
Benzie.....	G. O. Edmunds, Honor.....	E. L. Covey, Honor.
Berrien.....	F. R. Belknap, Benton Harbor.....	R. C. Allen, St. Joseph.
Branch.....	A. G. Holbrook, Coldwater.....	E. E. Hancock, Girard.
Calhoun.....	R. M. Gubbins, Ceresco.....	R. D. Sleight, Battle Creek.
Cass.....	S. K. Knight, Marshall.....	J. L. Ramsdell, Albion.
Chippewa.....	G. J. Dickinson, Sault Ste. Marie.....	J. Rosenthal, Sault Ste. Marie.
Clinton.....	E. S. Martin, Maple Rapids.....	W. H. Gale, St. Johns.
Delta.....	A. F. Snyder, Escanaba.....	H. B. Reynolds, Escanaba.
Dickinson.....	A. M. Darling, Crystal Falls.....	E. P. Lockart, Norway.
Eaton.....	G. B. Allen, Charlotte.....	F. Weaver, Charlotte.
Emmet.....	L. W. Gardner, Harbor Springs.....	G. W. Nihart, Petoskey.
Genesee.....	R. R. Murray, Flint.....	J. C. Wilson, Flint.
Gogebic.....	J. R. Moore, Ironwood.....	G. F. Loope, Bessemer.
Grand Traverse.....	E. B. Miner, Traverse City.....	F. P. Lawton, Traverse City.
Gratiot.....	Stiles Kennedy, St. Louis.....	J. F. Snyder, Alma.
Hillsdale.....	H. C. Miller, Hillsdale.....	D. W. Fenton, Reading.
Houghton.....	W. K. West, Painsdale.....	W. T. S. Gregg, Calumet.
Huron.....	A. E. W. Yale, Bayport.....	J. E. Thompson, Elkton.
Ingham.....	G. B. Wade, Laingsburg.....	L. W. Toles, Lansing.
Ionia.....	C. S. Cope, Ionia.....	J. W. Little, Belding.
Isabella.....	L. B. Dickinson, Shepherd.....	J. F. Adams, Mt. Pleasant.
Jackson.....	M. C. Strong, Jackson.....	J. C. Kugler, Jackson.
Kalamazoo Academy.....	P. T. Butler, Kalamazoo.....	E. J. Bernstein, Kalamazoo.
	J. H. Crosby, Otsego.....	L. H. Stewart, Kalamazoo.
Kent.....	R. W. Luce, Grand Rapids.....	D. R. Meengs, Grand Rapids.
	L. E. Chappelle, Grand Rapids.....	Ralph Apted, Grand Rapids.
Lapeer.....	W. J. Kay, Lapeer.....	Adam Price, Almont.
Lenawee.....	R. M. Eccles, Blissfield.....	I. L. Spalding, Huron.
Livingston.....	Jeanette Brigham, Howell.....	C. B. Erwin, Hartland.
Macomb.....	Wm. Greenshields, Romeo.....	H. T. Berry, Mt. Clemens.
Manistee.....	W. E. Coates, Onkama.....	L. S. Ramsdell, Manistee.
Marquette.....	N. J. Robbins, Negaunee.....	C. J. Larson, Negaunee.
Mason.....	L. H. Duguid, Custer.....	W. H. Taylor, Ludington.
Mecosta.....	J. McNeece, Morley.....	G. McAllister, Stanwood.
Menominee.....	R. O. Walker, Menominee.....	C. R. Elwood, Menominee.
Midland.....		
Monroe.....	C. T. Southworth, Monroe.....	W. F. Acker, Monroe.
Montcalm.....	J. Purdon, Edmore.....	J. O. Nelson, Howard City.
Muskegon.....	G. J. Hartman, Muskegon.....	C. F. Smith, Whitehall.
Newaygo.....		
Oakland.....	J. C. Black, Milford.....	N. I. Baker, Milford.
O. M., C. O., R. O.,.....	L. A. Harris, Gaylord.....	E. L. Forde, Gaylord.
Osceola.....	E. N. Heysett, Baldwin.....	H. L. Foster, Reed City.
Ottawa.....	H. Kremers, Holland.....	D. G. Cook, Holland.
Presque Isle.....	John Young, Onaway.....	N. C. Monroe, Millersburg.
Saginaw.....	E. E. Curtis, Saginaw.....	J. W. McMeekin, Saginaw.
Sanilac.....	G. S. Tweedy, Sandusky.....	A. W. Truesdale, Shabbona.
Schoolcraft.....	G. M. Livingston, Manistique.....	J. M. Sattler, Manistique.
Shiawassee.....	J. A. Rowley, Durand.....	A. L. Arnold, Owosso.
St. Clair.....	S. K. Smith, Port Huron.....	A. E. Thompson, St. Clair.
St. Joseph.....		
Tri.....	C. E. Miller, Cadillac.....	R. Brodeur, Cadillac.
Tuscola.....	R. M. Olin, Caro.....	W. C. Garvin, Mayville.
Washtenaw.....	Reuben Peterson, Ann Arbor.....	J. A. Wessinger, Ann Arbor.
	J. W. Keating, Ann Arbor.....	Carl D. Camp, Ann Arbor.
	A. P. Biddle, Detroit.....	C. E. Simpson, Detroit.
	F. W. Robbins, Detroit.....	W. D. Tiffin, Detroit.
	G. L. Kiefer, Detroit.....	J. A. Winter, Detroit.
Wayne.....	L. J. Hirschman, Detroit.....	V. C. Vaughan, Jr., Detroit.
	W. C. Stevens, Detroit.....	W. A. Hackett, Detroit.
	J. E. Davis, Detroit.....	J. A. McVeigh, Detroit.
	Florence Huson, Detroit.....	C. G. Anderson, Detroit.
		C. W. Wagner, Detroit.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

The Relation of Diphtheria in the Human to that in the Lower Animals.—SAMBON believes that the membranous disease which has long been known to occur in epidemics in certain lower animals—notably birds, horses and cows—is essentially the same disease as diphtheria in man, and caused by variations of the same bacillus. He suggests that the relation is analogous to that between human, bovine, and avian tuberculosis. He discusses the history of some widespread epidemics among lower animals, particularly those where there was a coincident epidemic among human beings, or where the epidemic among humans was preceded or apparently originated from the epidemic in lower animals. He gives a summary of our rather incomplete knowledge regarding diphtheria in animals, and then discusses at some length the epidemiology of human diphtheria, pointing out its many peculiarities, in geographical distribution, seasonal prevalence, preference for water bodies, spread with the wind, frequency in rural districts, etc., all of which have offered obstacles to explanation, and have led to the popular ideas of spontaneous origin from sewage, relation to rainfall, and other widespread and obstinate beliefs. All these things he thinks are readily explained if one concedes the identity of diphtheria in man and various animals, and its transmissibility from one to the other, and he proceeds to some interesting theories as to various ways in which bacilli might be transferred to man by domestic animals or their products, such as milk and eggs. His idea of the transmission of the disease for long distances by birds of passage, and attempt to identify as diphtheria the plague described in the eleventh chapter of Numbers as following the eating of quail, are certainly ingenious.—*Lancet*, April 18, 1908.

Serum Reaction in Scarlet Fever and Measles.—SCHERESCHEWSKY experimented with scarlet fever and measles patients as to the possibility of obtaining a reaction analogous to that described by Fornet and himself as occurring between the sera of secondary syphilitics and paralytics. The technic followed was substantially

the same as in the syphilis experiments, eight drops of perfectly clear serum from each of two persons being brought together layerwise in a narrow glass tube. The reaction consists in the formation of a ring of precipitate at the line of contact, similar to that obtained in Heller's test. (It is advantageous to dilute one of the sera somewhat with physiological salt solution to alter the specific gravity.) Experiments with about 30 scarlet fever patients, controlled by 25 non-scarlatinous, convinced him that this is a specific reaction, as the serum of patients in the beginning of the disease always reacted with that of convalescents, while either of these sera was neutral to that of normal individuals, or that of patients with other diseases. He does not give any figures as to how long after convalescence the "precipitin" is found in the serum. Serum from a woman convalescent from streptococcus sepsis did not react with the scarlet fever serum. In his experiments with measles patients he obtained a reaction only once, between the sera of patients in the second and third days. This he takes as indicating that the "precipitin" disappears rapidly from the blood in measles.—*Munch. Med. Wochenschr.*, April 14, 1908.

Rectal Administration of Antitoxic Sera.—PARKINSON recalls the fact that it is now over six years since he first published his observations on the effect of administering certain sera by the rectum. He reiterates his belief in the efficacy of the method, and cites observations on upward currents in the intestine as indicating the possibility of the serum being carried to a part whose absorptive power is greater, as well as the recently published reports of Calmette, Breton, Forrario, and others, showing that tuberculin, tetanus antitoxin, and plague toxin are readily absorbed by the rectal mucous membrane. He apparently does not recommend rectal administration of diphtheria antitoxin in severe cases, because the absorption is probably slower than in the hypodermic method, but cites a case, where, owing to objection to the use of the needle, he resorted to the rectal method with good results.—*Lancet*, May 2, 1908.

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

Nitroglycerine in the Treatment of Neuritis.

—STEVENSON speaks of the excellent results he has obtained by the use of nitroglycerine in the treatment of neuritis. His attention was first attracted to this subject by Krouss, of Buffalo, who reported wonderful results by the use of nitroglycerine.

The cases were as follows:

One brachial plexus unilateral, one bilateral involvement of the radial nerve, one unilateral sciatic nerve affected, and three involving the nerves of the face. There are seven cases termed chronic, distributed as follows: Four cases involved the sciatic and lumbar plexus, two the sciatic alone, and one a bilateral involvement of the brachial plexus.

The etiology was more or less clear in this group of cases. Fifteen were the result of grippe. One followed an attack of typhoid fever, and five were put down to exposure. Of the subacute cases three were neglected acute cases due to influenza, two were diabetic in origin, and in one case the causative factor was obscure. Of the seven chronic cases five had passed through the preceding phases of the disease without relief when he saw them. Two were neglected grippe sequelæ; gonorrhea was supposed to be the cause of two of this group. He did not include cases of neuritis due to pressure or injury in this group, as the treatment of such conditions is obvious.

Nitroglycerine was administered to all these patients in the following routine manner: Beginning with grain 1-100 every eight hours the interval was reduced one hour in every twenty-four until the full physiological action of the drug was manifest or the patient was taking grain 1-100 every three hours, at which interval it was continued. The disagreeable flushing and headache were controlled by small doses of sodium bromide. When an idiosyncrasy was marked the interval between the doses was lengthened.

The effect of the treatment was marked in the acute cases within the first forty-eight hours. All of the twenty-one cases were discharged within one week, and some a few days before. The subacute cases responded rather more slowly, but were all cured within two weeks. The two diabetic cases in this group responded to the treatment in a few days, but returned in the course of several weeks after withdrawal of the drug. They, however, responded to the treatment when readministered. A marked diminution of the quantity of urine and sugar voided was noticed

when the drug was used. The results in the chronic cases were not so brilliant. The condition was, however, improved in all. Three patients were discharged in three weeks, two in one month; one was greatly improved in three weeks, but disappeared from observation. One became discouraged, while improving slowly, at the end of three weeks, and quit the treatment.

In the treatment of the chronic cases ammonium and potassium iodide were given in progressively increasing doses. It seemed to hasten the action of the nitroglycerine. The actual cautery was also employed over the course of the nerve affected. Appropriate treatment for associated conditions was instituted when indicated.—*Medical Record*, May 16, 1908.

Pernicious Vomiting of Pregnancy.—J.

WHITTREDGE WILLIAMS declares that a treatment in a given case of vomiting in pregnancy should depend on the variety with which one has to deal. Any existing abnormality of the generative tract or ovum should be remedied as far as possible. In the case of hydramnios or hydatidiform mole pregnancy should be promptly terminated. If the vomiting is of the toxemic variety abortion should be induced. After the uterus has been emptied, the patient should be given abundant saline injections by the rectum or subcutaneously if the former are not well borne. The stomach should be washed out occasionally by a weak solution of sodium bicarbonate if vomiting is persistent. The patient should not be fed by mouth. Even ice should be withheld until the vomiting ceases. Reliance should be placed upon the salt infusion and enemata and the use of rectal feeding. In neurotic cases a vigorous moral lecture may prove all that is necessary. In other instances of this kind the patient should be told that her condition will not have a fatal termination. Some harmless remedy should be given with the most minute instructions concerning the character of the food and the manner in which it should be taken. If suitable treatment is not followed by improvement within three or four days, the patient should be removed to a hospital for a rigorous rest cure. The majority of the patients, however, do not demand drastic measures, but begin to improve within a week. The writer believes that the induction of abortion will become necessary less and less frequently, being reserved finally almost entirely for the cases of toxemic vomiting.—*Am. Jour. Ob.*, March, 1908.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. S. OAKMAN, M. D.

The Occurrence of Congenital Adhesions in the Common Iliac Veins, and their Relation to Thrombosis of the Femoral and Iliac Veins.

—McMURRICH, in an examination of 107 cases, found adhesions in the iliac vein in 35. The adhesions were within the veins and were of four types. First, a strand-like columnar adhesion, dividing the vessels into two portions for a distance of sometimes six m.m.

Second, a marginal adhesion at the lateral border of the lumen, producing a diminution but not a division of the lumen. Third, a marginal adhesion at the medial border, producing likewise a narrowing, but not a division of the lumen. Fourth, a perforation of the vein, so that it has a true double lumen.

The first two varieties were most frequently met, and the last variety was found only once. In one case a combination of the second and third types was found. A striking feature of the statistics was the preponderance of adhesions in the left iliac vein as compared with the right, 91.4%. Whether the frequency of occurrence differs in the sexes McMURRICH is unable to state, as his examinations included only 17 women. He believes, however, that the presence of these congenital adhesions may be a factor in the occurrence of thrombosis of the femoral and iliac veins, owing to their interference with the blood stream; moreover, it is well known that thrombosis is far more frequent on the left side, as are these adhesions also. The anatomical fact of the right iliac artery crossing the left iliac vein has also a probable influence in determining thrombosis.

The adhesions are believed by the author to be congenital in origin, due to the incomplete disappearance of a loop by which the iliac vein in the embryo originally surrounded an artery, probably the umbilical. This view is strengthened by certain considerations of comparative anatomy. That the pressure of the right iliac artery upon the vein has some influence upon the causation of the adhesions is also probable, especially as the large majority of adhesions occurred at the level of the crossing.

There is a table appended, showing the sex, age, cause of death, type of adhesion, and location, in each instance.—*Am. J. of Med. Sc.*, March, 1908.

Primary Ovarian Pregnancy, with the Report of a Case.—NORRIS and MITCHELL of Philadelphia report an absolutely certain case of ovarian gestation, with detailed pathologic description, gross and microscopic. The condition is rare, or at least, undoubted cases have so seldom been reported that a reliable instance is of great interest. The conditions which must exist, in order for a diagnosis of ovarian pregnancy to be made, are, according to Spiegelberg, as follows:

1. The tube on the affected side must be intact and have no organic connection with the gestation sac.
2. The fetal sac must occupy the position of the ovary.
3. It must be connected with the uterus by the ovarian ligament.
4. Definite ovarian tissue must be found in the sac-wall in several places.

From a search of the literature, the authors have found 16 positive cases, 15 highly probable, and nine fairly probable cases. All of the positive cases were of three months' duration or less. Twelve of the highly probable cases were at term, which is significant as proving the ovary to be much more distensible than the tube. Tubal gestation very rarely reaches full term.—*Surgery, Gynecology, and Obstetrics*, May, 1908.

The Ophthalmo-Tuberculin Reaction; some Observations.—FLOYD and HAWES of Boston, working with out-patients, report the trial of the ophthalmo-tuberculin reaction in 232 cases, of which many were known to be tuberculous, some were doubtful, and a large number were non-tuberculous and normal individuals. The tuberculous subjects included those with pulmonary, joint, glandular, genito-urinary, and ocular lesions. The cases are reported in five groups, as follows: Group 1, 26 persons apparently normal. Group 2, 32 persons with acute diseases other than tuberculosis. Group 3, 43 cases of chronic diseases other than tuberculosis. Group 4, 72 cases of suspected tuberculosis. Group 5, 58 cases of known tuberculosis.

From a study of these groups the authors conclude that the ophthalmic test is valuable for its simplicity, lack of constitutional symptoms, and freedom from danger; that it will not replace, but will greatly assist older methods.—*Bost. Med. and Surg. J.*, Feb., 1908.

PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

The Pathology of Tuberculosis in Children.

—JOHN McCRAE remarks upon the many conflicting statements regarding pathology. He considers the following groups: First, the small class (1.3%) who in early infancy have intestinal tuberculosis from ingestion. Second, those who store up germs for a longer or a shorter time, and finally suffer from an infection which is generalized. This shows itself in a variety of different forms—bone and joint tuberculosis, lymphatic tuberculosis, and so on, and is apt to end by meningeal tuberculosis or tuberculous bronchopneumonia in a tuberculous lung. Third, those few older children who develop phthisis.

Investigation indicates that of children under five years of age affected by tuberculosis, four-fifths were probably infected by air-borne human bacilli. One-fifth may show the "bovine" form, and this percentage decreases greatly as the age progresses. When infection occurs in a child, the first site of air-borne infection is some part of the lymphoid tissue of the upper air passage or the lungs, and in intestinal infection, the mesenteric nodes.

While familiar with the arguments of Behring and other upholders of milk-borne infection, McCrae thinks we have laid too great stress upon such infection where the bovine disease is prevalent, and have forgotten that the children are more liable to the human form than adults, in that if they do become exposed to a house or other local infection, they spend less time away from their dangerous surroundings than do their adult relations.

In speaking of the other forms of tuberculosis, why in certain cases does the disease manifest itself in bone and joint and remain there, McCrae feels sure this phenomena is some expression of the sum total of lowered bacterial virulence and heightened resistance of an individual tissue. There are many cases of tuberculosis in children that one sees where the lymph nodes seem to be the main seat of the disease, and it has sometimes struck him as possible that, when we speak of "scrofulous diathesis," etc., and malign the resisting power of such a child, we may make a mistake; the concentration of disease in lymph nodes may be but a mark of the tremendous fight the lymphoid tissue is making, and perhaps the universally tuberculous nodes are but another expression for a generalized miliary tuberculosis, but one that has been countered by a better resistance on the part of the child. It is true that by the time the autopsy table is reached the end result is usually the same, but the widespread miliary condition may have been long postponed by this same "tendency to enlarged glands."

Meningeal tuberculosis is a very important sub-

ject, and a very frequent form, but in what a large percentage (80%) of cases it is merely a local evidence of a generalized tuberculosis! It occurs either as secondary to a bronchial or other gland infection without there being disease elsewhere, or as a local manifestation of the disease that exists in many other organs. The latter is more frequent.

Of generalized tuberculosis McCrae's experience has been that the most frequent site of involvement is the lung, which was affected in 95%. In more than half the cases the following organs were affected, in the stated order of frequency: lymph nodes, spleen, liver, intestines, meninges, and kidneys. Tuberculosis in the brain was about one-fourth as frequent as meningeal involvement. Finally the question remains obscure, as to how the bacteria actually pass the surface of the pharynx, bronchus or intestines. Few observers believe that a lesion is necessary. Doubtless some bacteria adhere to fat droplets and are engulfed by unobservant phagocytes; probably small growing colonies on the surface can exert an eroding action on the mucosa by their toxins. It is worth considering if the youthful mononuclears, exalted in number as they are in childhood, are more keen to take up tubercle bacilli than their more fastidious successors.—*Archives of Pediatrics*, Apr., 1908, Pg. 277.

Channels of Communication in Tuberculosis: Their Relative Significance.—HAMILL reaches conclusions as follows:

1) That it is impossible to gain any knowledge as to the port of entry, either from the location or the degree of development of the tuberculous lesions. (2) That fetal infection is proven, but not common. (3) That infection through the mouth, tonsils, and pharynx is of frequent occurrence, and may be produced by inhalation or ingestion. (4) That primary inhalation infection through the lungs does not occur. (5) That infection through the intestinal tract is definitely proven. (6) That the bronchial glands and lungs may be infected through the intestinal tract, as well as through the lower respiratory tract. (7) That the relative significance of the various modes of infection is very difficult to determine, on the basis of our present knowledge, since it has been clearly shown that it matters not from what point the tubercle bacillus is introduced, it can eventually reach the bronchial glands and lungs without leaving any evidence of its mode of entrance. HAMILL is inclined to believe that infection by the intestinal tract is more common in infants and children than infection through the lungs.—*Archives of Pediatrics*, April, 1908, pg. 288.

OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

The Role of the Pneumococcus in Ocular Infections.—Modern bacteriological researches have taught us the fact that the pneumococcus lanceolatus plays an important part in the causation of several diseases of the eye and of its appendages. It has been found in inflammations of the lachrymal gland and sac, of Tenon's capsule, of the connective tissue of the orbit, of the eyelids, of the conjunctiva, of the cornea, and in metastatic forms of panophthalmitis.

It is probable that the pneumococcus in attenuated forms can be found now and then in the healthy conjunctival sac. Inoculations of the human conjunctiva have been made. H. Gifford inoculated his own eye as well as one of his assistants with pus from a case of pneumococcal conjunctivitis with positive results. In addition to this, he obtained a positive result in two patients to whose conjunctival sacs he applied an anaerobic culture of the third generation. Halle relates an interesting experience of a medical man who inoculated his own eye during the performance of a thoracentesis for the relief of a pneumococcal pleurisy, and seven days later developed a pneumococcal conjunctivitis. He also mentioned another case where conjunctivitis followed three days after the entrance into an eye of the saliva and nasal secretion from a child affected with pneumococcal conjunctivitis.

No micro-organism is more important as a causative factor in chronic inflammation of the lachrymal sac than the pneumococcus. Any slight abrasion of the cornea offers opportunity for infection, giving rise to that destructive affection of the eye known as "serpiginous ulcer of the cornea" or "hypopyonkeratitis." It is this fact that causes the ophthalmic surgeon to insist on the cure of catarrhal affection of the lachrymal sac.

"Occasionally in babies, owing to delayed developmental processes, the naso-lachrymal duct, instead of being patent at birth, is more or less closed by mucous folds or filled with inspissated secretion from liquefaction of the epithelial cells, which in fetal life form the rudiment of the lachrymal-nasal duct." Should infection occur either before or after birth, we have a kind of dacryocystitis produced—or an actual lachrymal abscess. In this condition the pneumococcus is often present.

Pneumococcal conjunctivitis may be considered as it affects (1) newly-born babies, and (2) older subjects.

(1) Ophthalmia neonatorum; two-thirds of all cases caused by gonococcus, 10 per cent of all cases due to pneumococcus. The later cases are not so severe, often much improved in four or five days.

(2) In older subjects pneumococcal conjunctivitis may appear under various clinical guises. Usually associated with coryza, the presence of a pellicle of fibrin on the surface of the palpebral conjunctiva or of small multiple ecchymoses into the ocular conjunctiva, and lastly of a floating rose-colored puffiness of the free edge of the eyelids. The microscope is necessary for an accurate diagnosis.

Cornea. The importance of pneumococcal infection of the cornea cannot be overestimated. Serpiginous ulcer is due to pneumococcal infection, according to Römer, in 95 per cent of all cases. According to Professor Laber, in hypopyon-keratitis the pneumococcus, derived either from a diseased lachrymal sac, or conjunctiva, or foreign body, or saliva, gets access to the cornea through some abrasion. Once in the substantia propria, however, the organism spreads and elaborates its toxins. Although Descemet's membrane is germ-proof, yet it appears to oppose no barrier to the diffusion of toxins. The latter are enabled to pass through the membrane and in that way to reach the aqueous humor and the structures in contact with the humor, as the iris. Leucocytes are caused to migrate into the anterior chamber, where they become visible under the guise of a collection of pus (hypopyon). This process explains the fact that pus in the anterior chamber is free from bacteria. The only exception to this rule is to be found in cases where the cornea has already perforated. While very severe in adults, hypopyon-keratitis in children as a rule is a much milder affection, yielding to simple treatment.

Pneumococci are not uncommon in keratomalacia, a kind of gangrene of the cornea apt to supervene in young children much enfeebled by wasting disease.—SYDNEY STEPENSON, *Ophthalmoscope*, March, 1908.

AC
Youn
treate
there
ing si
in 14
ing so
in 1.5
doubt
per ce
or 93
20 pe
eight
twelve
litis.
Pro
of ter
per ce
or 46
or 95
head u
cent;
per ce
per ce
or 28
16 per
In t
of pai
certain
infants
Ver
and fin
which
reveal
Subj
pain;
to rest
enlarg
the an
sympto
1. 7
and co
the co
infecti
examin
cause
disease

OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

Acute Purulent Otitis Media in Infants and Young Children.—Of 248 cases examined and treated by HER IG in five years in private practice, there originated acute purulent otitis media during simple catarrh in 56 per cent, during measles in 14 per cent, during dentition in 2 per cent, during scarlet fever in 20 per cent, during pertussis in 1.5 per cent, during mumps in 0.5 per cent, and doubtful were 6 per cent. Eighty-nine cases, or 36 per cent, originated from exanthemata; 230 cases, or 93 per cent, had adenoids; forty-eight cases, or 20 per cent, had hypertrophied tonsils; twenty-eight cases, or 11 per cent, had acute coryza, and twelve cases, or 5 per cent, had follicular amygdalitis.

Proportion of symptoms in 248 cases: 1, Rise of temperature was present in 248 cases, or 100 per cent; 2, pain, and 3, tenderness in 114 cases, or 46 per cent; 4, extreme restlessness in 236 cases, or 95 per cent; 5, refusal of the child to rest its head upon the affected side in 125 cases, or 50 per cent; 6, glandular enlargement in 189 cases, or 76 per cent; 7, nasal discharge in 136 cases, or 54 per cent; 8, gastroenteric symptoms in 69 cases, or 28 per cent; and 9, convulsions in 40 cases, or 16 per cent.

In these cases 50 per cent showed the absence of pain or tenderness, which fact proves how uncertain the symptom of pain or tenderness is in infants and young children.

Very frequently a physician examines an ear and finds what appears to him a white membrane, which, if carefully and delicately swabbed, will reveal an angry, red, bulging ear drum.

Subjective symptoms are: 1, Temperature; 2, pain; 3, extreme restlessness; 4, refusal of infant to rest head upon affected side; 5, tenderness; 6, enlargement and tenderness of the glands under the angle of the jaw; 7, a nasal discharge; 8, symptoms of gastroenteritis; and 9, convulsions.

1. The temperature is one of the most reliable and constant symptoms that we have. If, during the convalescence of an infant from one of the infectious fevers, the temperature suddenly rises, examine the ear, and you very frequently find the cause of the trouble here. Also in gastroenteric diseases, when the patient is improving, but the

temperature remains high, examine the ear, and in 95 per cent of the cases you will find an acute otitis media the cause of the temperature.

2. Pain is the most inconstant symptom we have in acute otitis media in infants. Kerley, 1901, reports seventy-seven cases, of which number there was a total absence of pain and tenderness in 69 per cent, and yet these infants all suffered from an acute otitis media. In cases where pain is present it is shown by the short, spasmodic cry of the infant, which is increased by pressure upon the auricle and in the angle of the lower jaw.

3. Extreme restlessness is a very constant symptom in infants, being present in over 90 per cent of the cases. In cases of gastroenteritis we often see extreme restlessness as the only symptom of an acute otitis media.

4. Refusal of the child to rest its head on the affected side was brought to notice by Dr. Marsh in 1897. This is not a constant sign, as it only appears in about 50 per cent. of cases.

5. Tenderness upon pressure, already described.

6. Enlargement of the glands under the angle of the jaw is fairly constant, as the author has been able to collect 248 cases in his own experience where the glandular enlargement was present in 189 cases, or 76 per cent.

7. A nasal discharge was present in 136 cases of the 248 cases, or 54 per cent. This discharge is generally of a glairy mucoid character, but oftentimes mucopurulent.

8. Gastroenteric symptoms, such as diarrhea and vomiting occur.

9. Convulsions occur in a small percentage of cases, and take the place of a chill, which we get in older children and adults.

Symptoms in older children are the same as those enumerated for infants, except the element of pain plays a greater role than in infants, and is a far greater constant symptom. Nausea is also a symptom often seen in older children. These children complain frequently of a fullness of the head. Anorexia is present in most of the cases in older children. In older children the gastroenteric symptoms are more marked than in infants. Headaches are also complained of.—*New York Medical Journal*, March 14, 1904.

ACTINO THERAPY.

Conducted by

H. R. VARNEY, M. D.

Treatment of Sycosis by the X-Ray.—The writer, HOWARD FOX, M. D., states that there are a few skin diseases, and only a few, in his opinion, in which the X-Ray is to be preferred to all other therapeutic measures. The X-Ray seems especially indicated in affections where epilation is desired, such as ring-worm, favus, and sycosis. It has certainly proved an exceptionally valuable agent in sycosis, a disease so often intractable to all methods of treatment.

The first cases of sycosis treated by the X-Ray were reported in 1899 by Freund and Schiff. These writers considered that the hairs acted as foreign bodies and that their removal would eliminate the inflammatory process in the follicles. As a matter of fact, they found that after epilation no new pustules appeared. It was also observed that before the hairs fell the acute inflammatory symptoms lessened and the infiltrated areas flattened and disappeared. At the same time the subjective symptoms abated. Their method did not require a dermatitis to produce results. As soon as reaction appeared the treatment was stopped. After 7 to 11 sittings the hairs loosened and fell, and in 10 to 12 days, all redness disappeared.

Since the pioneer work of Freund and Schiff a large number of cases of sycosis have been treated successfully by the X-Ray. Allen, who has treated 23 cases, almost all of long standing, says: "The results have been for the most part prompt and excellent, and in a few astonishing." Pusey says: "From a considerable experience in the treatment of sycosis with Rontgen therapy, I can recommend it strongly. The cases yield much more readily than from any other method." Stern in a recent report says: "The results accomplished in comparison with other methods are simply marvelous. I have repeatedly seen cases of five years' standing, involving almost all the hair follicles of the face, cured in six weeks' treatment. We have treated 105 of these cases, with almost 100 per cent cures."

The management of the cases depends largely upon their chronicity.

In the more acute cases a temporary epilation is alone required. It is always advisable to proceed with caution, as at times an unexpectedly severe dermatitis makes its appearance. In these cases it is important, as Holzknecht and others suggest, to keep the beard closely shaven for a year following X-Ray treatment. In the extremely obstinate and chronic cases it is often necessary that the beard be permanently epilated in order to obtain a lasting cure. Where a chronic rhinitis is

the cause of a sycosis of the upper lip it should receive appropriate treatment. At times permanent epilation is necessary to effect a cure. Schmidt says that in recurring cases of sycosis a long continued intermittent treatment must be given, in which an atrophic condition of the skin and telangiectases are inevitable. Even were this condition inevitable, it would be preferable in many cases to the more disfiguring original disease.

In conclusion he states that for the more acute cases of sycosis the X-Ray is the best therapeutic agent at our command; for the extremely chronic and obstinate cases it is the *only* reliable means of treatment.—HOWARD FOX, M. D., *Medical Review of Reviews*, New York, Feb. 1908.

On the Use of Smaller Doses of the X-Rays in Radio-therapy.—PROFESSOR H. RIEDER believes that in spite of much opposition, the development of radio-therapy during the last few years has made great progress. Indeed, in many fields, it competes with, and in some instances has even superseded, the kindred method of photo-therapy. This is especially so in the treatment of rodent ulcer, lupus, and other diseases of the skin.

Like all other remedial agents, this, the youngest branch of therapeutics, has a long period of development to pass through; and even now, after almost ten years of labor, we are often unable to decide whether any particular disease should, or should not, be subjected to Roentgen radiations. This ignorance, however, does not and should not, withhold us from making full use of this most important remedial agent in all suitable cases.

The experience of the last few years has not only taught us which types of disease are suitable for Roentgen treatment, it has also shown the necessity for carefully measuring and determining the quantity of the dose of rays which is to be given. In all quarters we see that the necessity of avoiding harmful action from the rays has led to a reduction of the original estimate of the required dose. Practically every radiologist has found himself obliged to make concessions in this respect.

In his opinion, it is the minimum and not the maximum dose which is now of the most importance in radio-therapy. The fact that the dose chosen was much too large for the purpose has been one of the chief causes of the untoward results which have now and then occurred.—*Archives of the Roentgen Ray*, Dec. 1907.

Mi

Vol. V

In p
pregna
desire
paper
cal an
to the
nated
varied
which
rather
and si
clini
points
and a

It i
that t
exhau
well a
gestat
points
condit
may
rather
Bot
too m
sympt
know
becaus

*Rea
March 1